

# APPENDIX 1: Management Action Plans to Support the INRMP

USARAK is committed to developing the following plans to support the natural resources management programs described in this INRMP. Development of these plans is addressed within this INRMP, including identification of funding mechanisms and priorities.

## 1. HABITAT MANAGEMENT ACTION PLAN

The Habitat Management Action Plan will be a prescriptive plan that directs all wildlife habitat rehabilitation, enhancement, and maintenance activities on Fort Richardson. The comprehensive plan will incorporate all facets of wildlife habitat management including methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. Wildlife species and groups considered within this plan include: moose, bear (brown and black), wolves, wolverine, lynx, coyote, fox, otter, beaver, small mammals, raptors, waterfowl, ptarmigan, grouse (spruce and ruffed), ravens, neotropical migrants, rainbow trout, Dolly Varden, and several species of salmon. The plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797), Migratory Bird Treaty Act (16 USC 703-711), Executive Order 12962, Recreational Fishery Resources Conservation Plan, Endangered Species Act, and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

## 2. WILDLIFE INVENTORY AND MONITORING ACTION PLAN

The Wildlife Inventory and Monitoring Action Plan will be a comprehensive plan outlining all details for conducting both routine and non-routine wildlife surveys, inventories and monitoring activities on Fort Richardson lands and waters. It will include, but will not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partnering agencies and/or groups participating in those activities. Wildlife species or types for consideration within this plan include: moose, bear (brown and black), wolves, wolverine, lynx, coyote, fox, otter, beaver, small mammals, raptors, waterfowl, ptarmigan, grouse (spruce and ruffed), ravens, neotropical migrants, rainbow trout, Dolly Varden, and several species of salmon. This plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797), Endangered Species Act, AR 200-3, and the Cooperative Agreement for management of fish and wildlife resources on Army lands in Alaska.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

## 3. WETLAND MANAGEMENT ACTION PLAN

The Wetland Management Action Plan will be a comprehensive plan written to protect, enhance, and maintain the biodiversity of wetlands on Fort Richardson. The plan will classify and prioritize wetland units in terms of size, functions, and values, with priorities assigned to wetland units. It will include, but will not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and

responsibilities of all partnering agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and optimum training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

#### 4. WATCHABLE WILDLIFE ACTION PLAN

The Watchable Wildlife Action Plan will identify and evaluate high-quality wildlife viewing areas on Fort Richardson and will develop strategies for incorporating wildlife viewing opportunities with conservation goals and the military mission. The plan will strive to provide a wide range of viewing opportunities in a manner that is consistent with the level of wildlife and habitat sensitivity. It will provide detailed scopes of work for each viewing site including, but not limited to: management of visitor use to avoid damage to wildlife and habitat, accommodation for disabled visitors, designs for viewing structures, location maps, signage, and interpretive media. It will include equipment and personnel requirements, time schedules, and budget estimates. The plan will consider viewing potential for beluga whales, waterfowl, alpine areas, and other wildlife, with emphasis on ecosystems. It also will include roles and responsibilities of all partnering agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and complementary to the ITAM program, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Nationwide Watchable Wildlife Interagency Memorandum of Understanding (3 DEC 1990), MOU Regarding Watchable Wildlife and Ecotourism in Alaska (5 NOV 1992), and AR 200-3.

CLASSIFICATION PRIORITY: undetermined

#### 5. FOREST MANAGEMENT ACTION PLAN

The Forest Management Action Plan will be a comprehensive plan written to implement a forest management program for Fort Richardson. The plan would provide for the enhancement of forest values, benefitting the Army training mission, and protecting and maintaining the productivity and biodiversity of the forest ecosystems on the installation. It will include, but not be limited to: methodologies, techniques, equipment and personnel requirements, study area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and the Wildlife Habitat Management Plan, and it will complement the ITAM program, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

#### 6. SPECIAL INTEREST AREAS CONSERVATION ACTION PLAN

The Special Interest Areas Conservation Action Plan will address all areas on Fort Richardson that contain unique, rare, unusual, atypical, sensitive, or otherwise special natural resources or environmental conditions that warrant protective or special management practices. Since these areas may vary considerably in their unique or special features, they will be treated individually within the plan. It will include detailed descriptions of each area along with individual management prescriptions. In some cases,

management actions may require stringent protection restrictions and constraints. This plan will be sensitive to and considerate of the military training mission by using a very conservative approach regarding restrictions and prohibitions. It will be fully coordinated with the ITAM program.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

## 7. OUTDOOR RECREATION MANAGEMENT ACTION PLAN

The Outdoor Recreation Management Action Plan will be a comprehensive plan directing all outdoor recreation activities on Fort Richardson with respect to the use of natural resources and the effects on the military mission. The plan will assess current and potential activities including, but not limited to: hunting and fishing, boating, off-road vehicle use (ATVs, snowmachines, airboats, airplanes), camping, picnicking, dog racing, horseback riding, berry picking, skiing, cabin use, birdwatching, and swimming. It will address issues including, but not limited to: access, management of use to avoid damage to wildlife habitat and training areas, harassment of wildlife, poaching, trespass, harvest limits, and usage fees. The plan will provide recommendations regarding the levels and types of use specific areas can sustain without adverse impacts. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. This plan will be compatible with the military training mission and it will complement the ITAM program, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

## 8. ITAM ACTION PLAN

The ITAM Action Plan will address all actions necessary to implement the ITAM plan on Fort Richardson. The ITAM plan will consist of monitoring the quality of training lands, providing data needed to make land use decisions, creating an awareness among land users of the importance of good land stewardship, preventing damage to land, and repairing damaged lands. The goal of the ITAM plan is to maximize mission use of training lands, minimize land maintenance costs and damage caused to the environment, and effectively meet natural resource management requirements. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities. The comprehensive plan will include methodologies, techniques, equipment and manpower requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. This plan will be compatible with the military training mission, ensuring both a healthy environment and an optimal training arena through sound and prudent stewardship.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3.

CLASSIFICATION PRIORITY: Class 1 (DAIM-ED-N, 21 March 1997)

## 9. LANDSCAPING ACTION PLAN

The Landscaping Action Plan will address landscaping and beautification of the post. The plan will present the user with information regarding past and present techniques and procedures for landscaping at Fort Richardson. In addition to providing landscape designs, it will discuss various materials used in landscaping on post and will furnish a detailed listing of plants proven hardy for northern climates. The

comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partner agencies and/or groups participating in those activities.

AUTHORITIES: Sikes Act (Public Law 86-797) and AR 200-3

CLASSIFICATION PRIORITY: Class I (DAIM-ED-N, 21 March 1997)

#### 10. FIRE MANAGEMENT ACTION PLAN

The Fire Management Action Plan will identify and evaluate strategies for conducting wildfire management on Fort Richardson. The plan would reduce forest-fire hazard caused by incendiary training and weapons, and would include a prescribed burning plan to enhance habitat as part of ecosystem management. The comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include roles and responsibilities of all partner agencies and/or groups participating in those activities.

#### 11. EROSION CONTROL ACTION PLAN

The Erosion Control Action Plan will identify and evaluate sites in need of erosion control on Fort Richardson and strategies to repair them. The plan also will include detailed scopes of work required to repair each site. The comprehensive plan will include methodologies, techniques, equipment and personnel requirements, area locations and sizes (GIS mapping), time schedules, and budget estimates. It also will include the roles and responsibilities of all partner agencies and/or groups participating in those activities.

#### 12. WILDLIFE/NATURAL RESOURCES ENFORCEMENT ACTION PLAN

The Wildlife/Natural Resources Enforcement Action Plan will be jointly developed by Natural Resources and the Fort Richardson Provost Marshal. This action plan will outline responsibilities, communication, duties, regulations, and provisions for carrying out natural resources wildlife enforcement. Protocols will be developed to address communication, meetings, after-action reports, chain-of-command, etc.

## APPENDIX 1-3: Fort Richardson Land and Natural Resources Management Policy

Over the last ten years, the U.S. Army Alaska Command has been inundated with numerous requests and proposals from state, federal, and municipal government agencies, businesses, utilities, clubs, organizations, and individuals for authorization or permission to use Army lands for nonmilitary purposes. Requests often have included commercial or long-term real estate interests involving rights-of-way, easements, land use permits, leases, outgrants, land transfers, exclusive use areas, and special concessions. This has been especially evident on Fort Richardson; some of the more notable of these include:

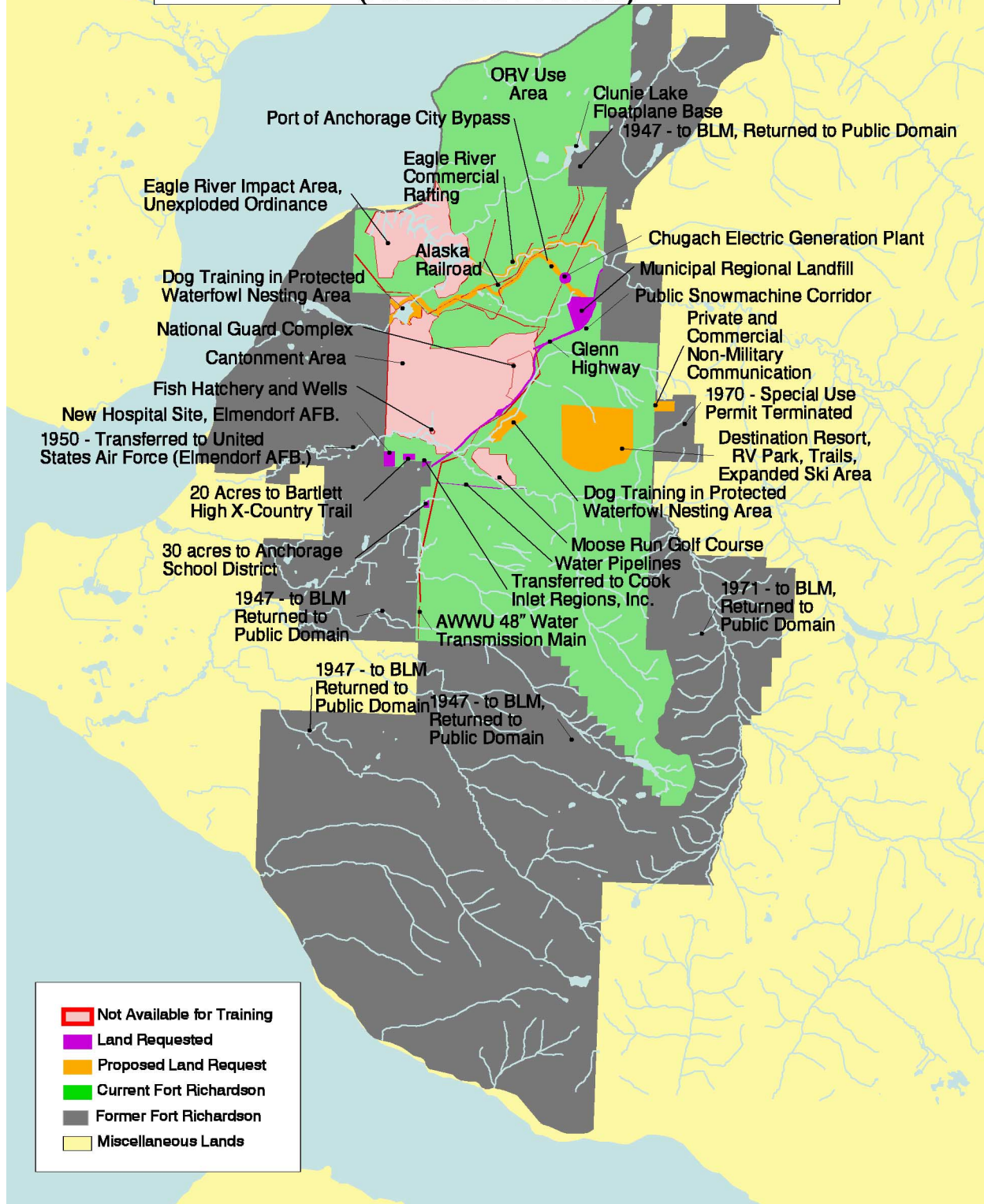
A public snowmachine trail and corridor through Fort Richardson connecting Anchorage and Eagle River along the Glenn Highway.

- ▶ A new right-of-way for the Alaska Railroad through Fort Richardson from Anchorage to Birchwood
- ▶ A real estate action to allow the Municipality of Anchorage to develop Clunie Lake on Fort Richardson into a float plane base
- ▶ Transfer of approximately 30 acres of Fort Richardson land to the Anchorage School District for a middle school
- ▶ Allow Bartlett High School to establish an official cross country ski trail on Fort Richardson lands
- ▶ Conduct commercial rafting operations on the Eagle River portion of Fort Richardson
- ▶ Development of a destination resort, RV camping areas, horseback riding trails, ORV areas, and associated recreational activities in Fort Richardson's Arctic Valley
- ▶ Use of Fort Richardson's protected waterfowl nesting areas for dog training by the Alaska Retriever Club
- ▶ Siting of a Chugach Electric generation plant on Fort Richardson
- ▶ Use of Fort Richardson lands by Ford Motor Company to test and advertise their vehicles
- ▶ Use of Fort Richardson lands for establishment of an oyster farm adjacent to Eagle River
- ▶ 300 acres of Fort Richardson training lands transferred to the Municipality of Anchorage for a landfill
- ▶ 65 acres of Fort Richardson lands transferred to Cook Inlet Region, Inc.
- ▶ 65 acres of Fort Richardson lands transferred to Elmendorf Air Force Base for new hospital site
- ▶ Port of Anchorage city bypass through Fort Richardson

Present day Fort Richardson, at 60,000 acres, is a fraction of its original size (161,000 acres). The loss of all these training lands over the years, coupled with the fact that urban development now surrounds much of the installation has and continues to force this Command to greatly limit and constrain much of its training activities. Despite this, Fort Richardson still offers our combat soldiers a valuable opportunity to train in a remarkable and varied environment. Its rugged beauty also is a key factor in enhancing our soldiers' and their families' quality of life. Unique in both its natural resources and its geographic location next to Alaska's largest city, Fort Richardson rises from sea level to over 5,300 feet within a distance of only twelve miles. Contained within its borders are all the ecosystems from maritime to alpine, and the myriad of plant and animal life that represent them. No other Army installation in the world can boast of having wildlife such as brown bears, wolves, moose, eagles, and whales roaming its lands, soaring through its skies, or swimming its waters.

As the populations of Anchorage and its satellite communities continue to grow and develop, it is anticipated that attempts to obtain or use portions of Fort Richardson for nonmilitary purposes will persist and probably increase. The term "military purpose" with regard to land use means the training

## Losses of Fort Richardson Training Lands (Actual and Potential)



mission and those support elements crucial to its implementation. This does not include those components that are designed for convenience, aesthetics, recreation, and non-training objectives, which often compete with the real mission. Given the present number of impact areas, drop zones, and other training sites, as well as restricted airspace, it is of grave concern that any additional long-term nonmilitary uses will create the potential for adverse impact on training and thereby threaten Fort Richardson's viability as a military installation. Besides the mission, USARAK is mandated by both law and common sense, through sound stewardship, to preserve the integrity and health of the environment. Only by doing this can the military be assured of maintaining the realistic "backdrops" and scenarios crucial to its training.

It is, therefore, the position of USARAK to generally deny requests for nonmilitary uses of Fort Richardson properties if those requests include or involve a requirement for long-term real estate commitments, such as leases, easements, or land transfers, or if they create a potential adverse impact on the military mission or the environment. The only exceptions to this will be when such actions clearly result in tangible benefits to the military training mission or on the environment. These situations will be carefully scrutinized and evaluated by appropriate staff elements. No longer is "good public relations" alone, a justifiable reason to sacrifice limited and crucial training lands. It also is the position of USARAK to adopt a policy which favors temporary, noncommercial low-impact uses of Fort Richardson by the local community, consistent with training and the military mission, as long as Fort Richardson natural resources will not be impacted adversely. Examples of some of these activities now in effect are:

- ▶ Use of the small arms ranges by the Alaska Rifle Club, Alaska State Troopers, Anchorage Police Department, Alaska State Park Rangers
- ▶ Dog mushers, snowmachiners, and ATVs in specified areas
- ▶ Cross country skiing
- ▶ Firewood cutting
- ▶ Iditarod sled dog race
- ▶ Alaska Retriever Club dog trials
- ▶ Special Olympics
- ▶ Boating and rafting
- ▶ Hunting and fishing
- ▶ Boy Scouts, Girl Scouts, and Cub Scouts
- ▶ Youth programs such as Campfire
- ▶ Iron Dog Snowmachine Race
- ▶ Wildlife Museum open to public
- ▶ Use of Otter Lake and Cottonwood Park by the public
- ▶ Youth Corps and High School JROTC training

This Integrated Natural Resources Management Plan will serve as the Command's guideline and directive for administering and managing natural resources on Fort Richardson lands and waters. It is implemented by both the USARAK Conservation and Integrated Training Area Management programs, primarily through the Public Works Environmental Resources Division and the Directorate of Plans, Training, Security and Mobilization. It will be consulted and used for every decision and action that affects or has a potential to impact Fort Richardson's lands, waters, and other natural resources.

Protecting the Environment is also our Business

Installation Commander  
U.S. Army Alaska





## APPENDIX 2-4: Fort Richardson Jurisdictional History

Document	Year	Mo/Day	Acres	Purpose	Stipulations/Notes
EO 8102	1939	1-May	36,570	Withdrawn from appropriation for military use.	Later amended by EO 9526 Feb 28, 1945, which states that the area will revert back to Dept. of Int. 6 mo. after termination of national emergency.
EO 8343	1940	10-Feb	4,935	Withdrawn from appropriation for military use.	Later amended by EO 9526 Feb 28, 1945, which states that the area will revert back to Dept. of Int. 6 mo. after termination of national emergency.
EO 8755	1941	16-May	18,600	Withdrawn from appropriation for military use.	
EO 8788	1941	14-Jun	160	Withdrawn from appropriation for military use.	
PLO 95	1943	12-Mar	6,360	Withdrawn from appropriation for military use.	Will revert to Dept. of Int. 6 mo. after termination of national emergency.
PLO 253	1944	7-Dec	84,555	Withdrawn from appropriation for military use.	Will revert to Dept. of Int. 6 mo. after termination of national emergency.
EO 9526	1945	28-Feb	61,005	EO 8102, EO 8343 and EO 8755 are amended.	Jurisdiction will revert to Dept. of Int. 6 mo. after termination of national emergency.
PLO 549	1949	31-Jan	40	Lands returned to the Dept. of the Interior.	
PLO 576	1949	29-Mar	84,555	PLO #253 is revoked and all lands are returned to Dept. of Int. jurisdiction.	

Document	Year	Mo/Day	Acres	Purpose	Stipulations/Notes
PLO 284	1945	12-Jun	6,360	Withdraws PLO 95 and others from appropriation for military use	Supercedes similar language in PLO 95 for reversion to Department of Interior 6 months following termination of unlimited national emergency
PLO 2676	1962	4-May	52,640	Amend PLO 95, EOs 8102, 8343, and 8755 by deletion of EO 9626	Retains to the Secretary of Interior jurisdiction of mineral and vegetative resources and reserves the authority to grant land use rights to others
PLO 582	1949	11-Apr	1,399	Withdrawal of lands for Alaska Railroad.	
GO 33 EFF	1950	15-Oct	9,042	Jurisdiction of lands is given to the Air Force.	
Ltr. Sec. of the Interior	1952	27-Oct	66,465	Lands remain in Army use after the national emergency is over	E.O. 8102, 8343, 8755, and PLO 95 are all affected, and will be returned to Dept. of the Interior when no longer needed for the military mission
PLO 891	1953	15-Apr	560	Lands returned to BLM or other appointed agencies. Partial revoking of EO 8755 and PLO 95	
PLO 1673	1958	2-Jul	1,401	Withdrawal of lands for Army use.	
PLO 1780	1959	3-Feb	1,897	Lands returned to BLM or other appointed agencies. Partial revoking of EO 8102.	

Document	Year	Mo/Day	Acres	Purpose	Stipulations/Notes
PLO 1840	1959	29-Apr	1,271	Correction of acreages on PLO 1673.	PLO 1673 stated 1,401 acres while PLO 1840 corrects to 1,271.
PLO 2134	1959	29-Apr	1,856	EO 8102 is revoked and lands are given to the State of Alaska.	
PLO 2029	1959	15-Dec	4,706	Withdrawn from appropriation for military use.	
PLO 2698	1962	11-Jun	90	Withdrawn for Army use to protect Nike Site Facilities.	
PLO 2962	1963	5-Mar	6,249	Jurisdiction given to Air Force.	Certain areas described under EO 8102, and EO 8343 are corrected so that Air Force has jurisdiction rather than the Army.
Special use permit	1965	17-Feb		Military use as part of firing fan.	
A-063442	1965	3-Sep		Releases land back to the Dept. of Int.	BLM file shows military requesting land to be given back into BLM jurisdiction and the BLM took responsibility for only a part of the acres that the military requested. (see BLM sup. A-053882)
A-053881	1968	8-Feb		Right-of-way easements for the Dept. of Army.	
PLO 5239	1972	14-Jul	4,720	Land acquired for use of the Ft. Richardson-Davis range.	No EIS was required by this action.

Document	Year	Mo/Day	Acres	Purpose	Stipulations/Notes
Co-op Agreement	1974			Army given access to BLM land.	
DACA85-4-7 6-92	1976			Air Force drop zone use.	Agreement with Air Force to build and maintain a drop zone area. A EIS was written and is included in the military file.
PLO 6244	1982	6-May	3,340	Lands acquired for use of the Ft Richardson-Davis range.	Army shall manage off-road vehicle usage, not allow further unexploded ordnance contamination, and has authority to manage all surface activities.
A-053882	1982	6-May		Land transferred from Dept. of Int. to Dept. of Army.	BLM file shows military requesting land to be given back into BLM jurisdiction and the BLM refusing to take responsibility of part of the acreages because of unexploded ordnances. (see BLM sup. A-063442)

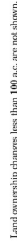


### Legend

**Public Land transferred into U.S. Army jurisdiction by Executive Order (EO).**

Public Land released  
from U.S. Army  
jurisdiction by Public  
Land Order (PLO) or  
other documents.

Reference maps are color keyed to time lines and associated markers. Markers without a tie to the timeline lack specific dates, but they are color keyed to areas on the corresponding map.







## APPENDIX 5-4a: Specific Items of Cooperation Between the Bureau of Land Management, U.S. Fish and Wildlife Service, Alaska Department of Fish and Game, and U.S. Army Alaska

**PURPOSE:** The purpose of this agreement is to specifically identify items to be provided by the Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service (USFWS), Bureau of Land Management (BLM), and U.S. Army Alaska (USARAK) for cooperative implementation of the Fort Richardson Integrated Natural Resources Management Plan. Items not specifically listed will generally be the responsibility of USARAK.

**AUTHORITY:** In accordance with the authority contained in Title 10, U.S. Code, Section 2671, and Title 16, U.S. Code, Section 670 (the Sikes Act as amended through November 24, 1997, PL 105-85) the Department of Defense, the Department of the Interior, and the State of Alaska, through their duly designated representatives whose signatures appear on the Fort Richardson Integrated Natural Resources Management Plan, specifically approve the Integrated Natural Resources Management Plan and the specific items of cooperation between the three agencies, found in mutual agreement which follows.

### MUTUAL AGREEMENT:

- ▶ Persons hunting or fishing on Fort Richardson are required to obtain special Fort Richardson hunting or fishing permits unless exempt by USARAK regulations. At present, there is no cost for these permits, but USARAK reserves the right to charge for these permits in the future. Any funds derived from the sale of these permits will be used exclusively for the implementation of the Fort Richardson Integrated Natural Resources Plan in accordance with Army regulations and the Sikes Act. Fees charged shall be established by the installation in accordance with Army regulations. Persons guilty of violating the requirement for these special permits may be prosecuted under 10 USC 2671(c).
- ▶ Persons desiring to hunt or fish on Fort Richardson must purchase state licenses, tags, and stamps as required by ADF&G, unless exempt by ADF&G regulations. ADF&G agrees that military personnel on active duty and permanently stationed in Alaska may purchase sport fishing and small game licenses at resident prices. ADF&G also agrees that active duty military personnel, not including dependents, may hunt big game without licenses or tags on military lands open to hunting, providing they obey Alaska hunting regulations. On other than military lands, military hunters stationed in Alaska must buy the appropriate resident or nonresident hunting license and tags to hunt. Nonresident military hunters (living in Alaska less than 12 months) stationed in Alaska can buy tags at one-half the nonresident cost.
- ▶ A federal waterfowl stamp is required for hunting waterfowl as prescribed by federal laws.
- ▶ All hunting and fishing on Fort Richardson will be in accordance with federal and state fish and game laws.
- ▶ Representatives of ADF&G, BLM, and USFWS will be admitted to the post at reasonable times, subject to requirements of military necessity and security. Such personnel may use U.S. Army transportation on a nonreimbursable basis, to include aircraft, for wildlife related functions on Fort Richardson provided such transportation is available without detriment to the military mission.

- ▶ ADF&G, BLM, and USFWS shall furnish technical assistance for development and implementation of professionally sound natural resources programs on Fort Richardson, provided funding for such support is available.
- ▶ USARAK shall furnish assistance and facilities to ADF&G, BLM, and/or USFWS for mutually agreed upon natural resources research projects. It shall be the policy of the Commanding General, USARAK, to encourage and support research conducted by the participating agencies. To this end, suitable land areas, animals, facilities, and personnel may be made available at the Commanding General's discretion, when requested, providing the proposed studies are compatible with, and in no way limit, accomplishment of the military mission.
- ▶ No exotic species of fish or wildlife will be introduced on Fort Richardson lands without prior written approval of the Army, ADF&G, and the USFWS.
- ▶ The USARAK Natural Resources Branch and ADF&G shall cooperatively establish season and bag limits for harvest of game species on Fort Richardson. USARAK may make special requests for such regulations according to procedures established by ADF&G. Requests for regulations not in accordance with those established statewide will be based on data specific to Fort Richardson or designed to meet Fort Richardson's training schedules.
- ▶ Hunting and fishing on Fort Richardson will be authorized and controlled by the installation commander in accordance with locally published installation regulations promulgated in compliance with applicable Federal and State laws, Army regulations, military requirements, and the Integrated Natural Resources Management Plan.
- ▶ If hunting, fishing, or other recreational pursuits interfere with ongoing studies on Fort Richardson, the Chief, USARAK Natural Resources, has the authority to stop, restrict or modify these activities to minimize conflicts. These modifications would be within established seasons and bag limits.
- ▶ Public access for hunting and fishing is approved under a system of controls established by USARAK in cooperation with ADF&G. Civilians will be considered on an equal basis with military and Army civilian employees for permits and access to hunting and fishing areas. Should there be a need for quotas on the number of hunters permitted on a daily or seasonal basis for reasons of safety, such quotas will not be instituted prior to consultation with ADF&G. Hunting and fishing will be allowed only in those areas where there is no conflict with military training activities and no unreasonable safety hazard to participants, military personnel and dependents, or Army civilian employees. Certain areas will be closed to hunting and fishing, including, but not limited to, impact areas containing unexploded ordnance and training areas with sensitive electronic equipment. Such areas will be marked as closed on post hunting maps. Training areas will be open on a daily basis when not scheduled for military training activities. Post maps indicating open and closed areas will be posted and updated daily, or as required, by USARAK.
- ▶ Fort Richardson has concurrent jurisdiction with regard to law enforcement. In areas of concurrent jurisdiction, Alaska laws may be enforced by either federal or state commissioned enforcement personnel. Enforcement will be a joint responsibility of USARAK, Alaska State Troopers, ADF&G, BLM, and the USFWS.
- ▶ USARAK agrees to cooperate with USFWS and ADF&G for management of any threatened or endangered species residing on the post. Such efforts will be in compliance with federal and state laws and applicable Army regulations.

- ▶ ADF&G agrees to continue to stock Fort Richardson lakes. ADF&G and USARAK will determine the number and species of fish to be stocked based on angler use trends and fish availability.
- ▶ ADF&G and the USFWS will provide technical and professional advice on all matters concerning wildlife and fish management when necessary. ADF&G will provide technical wildlife and fisheries assistance on a non-reimbursable basis, except in specific mutually agreeable instances. Assistance from the USFWS will be provided within funding and personnel limitations. Cost reimbursable assistance includes technical wildlife and fisheries assistance. Non-reimbursable assistance includes law enforcement assistance (excluding training), activities required of the USFWS by the Endangered Species Act, in particular Section 7, consultation or reviews associated with the National Environmental Policy Act and other federal laws, and limited participation in annual military fish and wildlife planning meetings.
- ▶ USARAK has the option to directly transfer funds to the ADF&G, USFWS, or BLM for implementation of this Integrated Natural Resources Management Plan.
- ▶ USARAK shall arrange meetings annually between all parties.
- ▶ It is understood that implementation of this INRMP requires certain latitude with regard to professional decisions. However, USARAK agrees that any land use change which significantly impacts natural resources must include modification of this INRMP in addition to any other environmental compliance requirements.

#### LIMITATIONS:

The military mission of Fort Richardson supersedes natural resources management and associated recreational activities; such activities must in all instances be compatible with the military mission. However, where there is conflict between the military mission and provisions of the Endangered Species Act, the Sikes Act, or any other law associated with natural resources conservation, such conflicts will be resolved according to regulatory requirements.

#### REQUIRED REFERENCES:

- ▶ Nothing contained in this agreement shall modify any rights granted by treaty to any Native Alaskans or Indian tribe or to members thereof.
- ▶ The possession of a special permit for hunting migratory game birds will not relieve the permittees of the requirements of the Migratory Bird Stamp Act, as amended.
- ▶ This INRMP is a Federal Facilities Compliance Agreement.
- ▶ As required by the Sikes Act, the following agreements are made:

(1) The Fort Richardson Integrated Natural Resources Management Plan is required by the Sikes Act, as amended, and contains those items specifically required by law.

(2) This plan will be reviewed by ADF&G, BLM, USFWS, and USARAK on a regular basis, but not less often than every five years.

(3) No land or forest products from land on Fort Richardson will be sold under Section 2665 (a) or (b), Title 10 USC and no land will be leased on Fort Richardson under Section 2667 of such Title 10 unless the effects of such sales or leases are compatible with the purposes of the Integrated Natural Resources

Management Plan.

(4) This Integrated Natural Resources Management Plan will become effective upon the date subscribed by the last signature and shall continue in full force for a period of five years or until terminated by written notice to the other parties by any of the parties signing this agreement. This agreement may be amended or revised by agreement between the parties hereto. Action to amend or revise may originate with any of the other participating agencies. Such actions must be in accordance with existing applicable and relevant laws, regulations, and policies, compatible with the military mission, consistent with sound stewardship practices, and may require new or additional National Policy Act documentation.

(5) USARAK, ADF&G, BLM and USFWS enter into this agreement based on the requirements and opportunities within the Sikes Act, as amended.

APPENDIX 5-10: Memorandums of Agreement (MOAs),  
Memorandums of Understanding (MOUs), Letters of Agreement  
(LOAs), Cooperative Agreements (CAs), and like documents associated  
with wildlife and natural resources.

**COOPERATIVE AGREEMENT  
BETWEEN THE  
UNITED STATES ARMY ALASKA  
AND  
COLORADO STATE UNIVERSITY**

**I. SUBJECT**

This COOPERATIVE AGREEMENT (hereinafter referred to as "this agreement") is between the Department of the Army, US Army Alaska (hereinafter referred to as "USARAK?") and Colorado State University (hereinafter referred to as "CSU?") to collect, analyze, and apply environmental data for optimal management of public lands under USARAK? s control.

**II. PURPOSE**

The purpose of this agreement is to establish the relationships, responsibilities, and activities to collect, analyze, and apply environmental data for optimal management of public lands under control of USARAK. USARAK manages over 1.6 million acres of public land. As is the case with all government agencies, USARAK must manage its lands in accordance with all environmental laws, such as the National Environmental Policy Act, Endangered Species Act, Clean Water Act, Sikes Act, etc. Compliance with these regulations requires accurate, current data on the status of the resources on the military installations and application of the data in management decisions. Collecting, analyzing, and applying these data also support the objectives of the Legacy Resource Management Program.

**III. AUTHORITY**

This agreement is entered into under the authority of Public Law 103-139, Public Law 101-511, and Army Regulation (AR) 200-3.

**IV. GENERAL PROVISIONS**

Public Law 103-139 provides in part that:

Notwithstanding the provisions of the Federal Cooperative Grant and Agreements Act of 1977 (31 U.S.C. 6303-6308), the Department of Defense may hereafter negotiate and enter into cooperative agreements and grants with public and private agencies, organizations, institutions, individuals, or other entities to implement the purposes of the Legacy Resource Management Program.

This agreement meets the following Legacy Resource Management Program purposes:

- a. To provide for the stewardship of all Department of Defense controlled or managed air, land, and water resources.
- b. To establish inventories of all scientifically significant biological, geophysical, cultural, and historic resource assets on Department of Defense lands. In addition to the specific attributes of the asset, these inventories are to catalog their scientific and or cultural significance, as well as their interrelationship to the surrounding environment, including the military mission carried out on the land upon which they reside.
- c. To establish educational, public access, and recreation programs designed to increase public appreciation, awareness, and support for these national environmental initiatives.

## **V. OBJECTIVES**

The objectives outlined herein may not be changed without written approval by the parties.

The primary objective of this agreement is to provide USARAK with research and management support to assist in optimal management of training lands, to minimize restrictions to the military mission due to natural and cultural resource-related constraints, to protect and enhance biological diversity and ecological health on all public and USARAK lands, and to ensure compliance with all environmental laws and regulations.

Specific objectives are as follows:

- a. To collect natural resource data necessary for the sound management of military lands. The land must be maintained in a condition to provide for optimal military training experiences and to protect the soil, water, vegetation, and wildlife resources in a healthy and diverse state.
- b. To assemble, edit, summarize, analyze, interpret, and apply environmental data to the management of natural and cultural resources on military installations. This is accomplished most efficiently with state-of-the-art computer analyses.
- c. To implement, administer, and further develop the Integrated Training Area Management program in order to optimize military training opportunities with concomitant protection of the many natural and cultural resources on military installations.
- d. To maintain a knowledge and appreciation of our collective cultural heritage by developing and implementing methods for conserving the prehistoric and historic cultural resources on public lands and military installations.
- e. To contribute to making the most sound, balanced decisions possible regarding land use and resource management on public lands and military installations by the provision of the best research, data, and analytical tools available.
- f. To train natural and cultural resource managers, and those that interact with them on

public lands and military installations, in the latest and most appropriate technologies to address resource management issues.

g. To educate military personnel on the potential environmental impacts of their training exercises, suggest ways to prevent or mitigate the impacts, and increase their awareness of the natural and cultural resources on the installation and the need to protect them for future use.

h. To identify potential pollutants of air, water, and soil, prevent their introduction into ecosystems, and mitigate their damage if introduction has already occurred.

The primary areas of research and support to be addressed under this agreement are:

- Natural Resource Data Collection
- Information Management
- Integrated Training Area Management
- Cultural Resource Data Collection and Management
- Planning and Decision Support
- Training
- Environmental Education
- Pollution Prevention

Natural resource data collection includes the gamut of information needed to manage renewable resources on a military installation. Basic inventories of the flora and fauna, condition and trend monitoring, rare and endangered species monitoring, baseline inventories, forest and rangeland inventories, game census, soil surveys, and other special purpose surveys contribute to baseline information on resources needed for supporting management decisions.

Information management encompasses all aspects of automated data processing, data analyses, and data interpretation and application to management needs. Support will be provided for computer systems used in environmental management. This support includes system definition, implementation, and maintenance, military and natural resources data collection recommendations, automated data collection, automated and non-automated data management, applications development, and Internet access and use. Geographic Information System (GIS) support will be provided in the form of hardware and software recommendations and setup, software and operating system technical support, data development, acquisition, and interpretation of remotely sensed imagery.

Integrated Training Area Management (ITAM) program support will be provided, to include all components of the program: Land Condition-Trend Analysis (LCTA); land restoration ecology; environmental awareness; and training requirements integration. LCTA program support includes all aspects of the program from plot allocation to data collection and analysis to report writing. Land restoration ecology is application of off-the-shelf technology and development of new techniques to repair lands damaged by military activities to a condition that halts further degradation (minimally) or restores native ecosystems (maximally).

Cultural resources data collection and management comprise all aspects of cultural resource conservation on public lands and military installations, both prehistoric and historic. Services include site surveys, excavations, artifact cataloging, preservation and management of collections, and development and implementation of management plans.



Planning and decision support contribute to making sound decisions regarding land use, natural and cultural resource management, military training impacts, project siting, etc. Environmental Assessments and Impact Statements are routinely necessary on public lands and military lands prior to initiating testing and training exercises, implementation of various resource management plans, siting projects, and construction activities. Such assessments and statements require large amounts of supporting data, information, and analyses. Planning documents are increasingly common and often required by law and regulations. Integrated natural resource management plans and cultural resource management plans are two examples. The plans, in turn, require supporting documentation, such as multiple layers of data in a GIS, vegetation community maps, and databases on the resources in question.

Training is available in many aspects of environmental management. Program specific training includes workshops on the ITAM and LCTA programs. Intensive, individualized training is often required for new and changing technologies, such as computer applications, GIS, remote sensing, global positioning system, etc. Programs of instruction are necessary to educate the military training community on environmental aspects of training.

Environmental education is aimed at preventing damage to public lands and military installation natural and cultural resources before it occurs. Development of educational programs and materials, particularly interpretive methods, increases awareness of human-caused disturbances and ways to prevent or minimize those disturbances.

Pollution prevention is the management of resources and hazardous materials to prevent their introduction to the ecosystem in any way that would compromise the quality of the air, water, and soil or the health and reproductive capability of organisms in the ecosystem.

## **VI. RESPONSIBILITIES**

USARAK is responsible for protecting, conserving, and restoring environmental, natural and cultural resources on all Army-administered lands in Alaska.

CSU, through its Center for Ecological Management of Military Lands (CEMML), has over ten years of experience working exclusively in support of natural and cultural resource management on military lands. CSU has unique experience in the ITAM program, currently working at over thirty installations around the country. In addition, CSU has supported USARAK's ITAM program by collecting, analyzing, and applying data for management decisions in Alaska since 1994. CSU has a proven track record of low cost, financial accountability, and producing superior products on time.

USARAK is willing to reimburse CSU for providing material, equipment, and technical assistance to accomplish USARAK's conservation mission.

Therefore, it is mutually agreed as follows:

a. USARAK agrees:

(1) To provide project development criteria for its conservation mission. In addition, USARAK will provide technical assistance where available and a general guideline of requirements necessary to carry out and complete the purpose of this agreement.

(2) To develop a scope of work for each project to be accomplished under this

agreement.

(3) To issue a delivery order, executed by a USARAK contracting officer, obligating funds to accomplish the agreed-upon scope of work at an agreed-upon price.

(4) To reimburse CSU for any supplies, equipment, travel and personnel services (including salary, benefits, sick and annual leave accrual), direct administrative cost for project procurement, logistical arrangements (travel, housing, utilities, vehicles, conferences, workshops and project reviews), human resources (job searches, processing of employment forms, project-specific personnel issues, time sheets, hourly employees and leave reports), project reports (editing, graphics, publication), program management, and overhead cost at the federally audited rate for CSU of 24.5% for off-campus activities and 30.5% for on-campus activities, consistent with OMB Circular A-21.

b. CSU agrees:

(1) To provide technical assistance through employees who have the expertise necessary to carry out the purpose of this agreement. The assistance will include, but is not specifically limited to: (a) collecting natural resources data necessary for the sound management of military lands; (b) assembling, editing, summarizing, analyzing, interpreting, and applying environmental data to the management of natural and cultural resources; (c) implementing, administering, and further developing the ITAM program; (d) developing and implementing methods for preserving prehistoric and historic cultural resources; (e) contributing to making the most sound, balanced decisions possible regarding land use and resource management by the provision of the best research, data, and analytical tools available; (f) training natural and cultural resource managers in the latest and most appropriate technologies to address resource management issues; (g) educating military personnel on the potential impacts of training exercises, suggesting ways to prevent or mitigate the impacts, and increasing awareness of the natural and cultural resources on the installation and the need to protect resources for future use; and (h) identifying potential pollutants of air, water and soil, and preventing their introduction into ecosystems, and mitigating their damage if introduction has already occurred.

(2) To enter into consulting agreements or subcontracts with other qualified agents who have the expertise to assist in the execution of this agreement.

(3) To purchase equipment, software, and materials and provide maintenance and repair of equipment that is required to carry out the purpose of this agreement. The equipment purchased under this agreement will be used to satisfy the objectives of this agreement. USARAK will reimburse CSU for the purchase price of required equipment and materials and cost the of maintenance and repair of said equipment necessary for project completion. Equipment and material purchased under this agreement shall become property of USARAK at the completion of work undertaken pursuant to this agreement.

(4) To bill USARAK monthly on a reimbursable basis for costs as provided under the terms of this agreement and individual delivery order. Billing statements should be addressed to:

Directorate of Public Works  
730 Quartermaster Road  
ATTN: APVR-RPW-EV  
Fort Richardson, Alaska 99505-6500

c. Both parties agree:

(1) That each party will assign a project officer to execute this agreement and that a meeting between the assigned project officers or their designated representatives shall take place at least twice a year. The first meeting shall be no later than March 15 of each year to determine the project priorities and funding required for the next federal fiscal year. The second meeting shall occur no later than October 15 of each year to finalize project goals and funding for that federal fiscal year. Other meetings will be held as requested by either party. It is understood by both parties that available funding is not guaranteed and that no work can be started until funding has been sent. An annual operating plan to be formulated by the parties' assigned project officers or designated representatives will be submitted to the Chief, USARAK Environmental Resources Department, and to CSU not later than March 30 of each year for funding during the next federal fiscal year.

(2) That USARAK will have final authority to prioritize projects.

(3) That USARAK will have complete and free access to all data generated under this agreement.

(4) That CSU personnel may attend applicable training sessions, meetings, and conferences on a space and funds available basis.

(5) That the Comptroller General of the United States, the USARAK contracting officer, or their duly appointed representatives, or cognizant audit agency shall have access to all directly pertinent books, documents, papers, and records relating to USARAK's and CSU's engagement in the performance of duties or involving any transactions relative to this agreement.

(6) That publication rights in academic journals and/or technical reports related to the work undertaken pursuant to this agreement shall be shared jointly between CSU and USARAK personnel or singly by permission of the other cooperator. Publication of any reports or parts thereof by CSU personnel shall be subject to review, comment, and authorization by USARAK. Appropriate credit shall be given to the Department of Defense in any formally published article, providing that USARAK does not determine that the issuance of a disclaimer is appropriate. The intent is that the knowledge learned be shared with others to assist in research and applied applications of procedures developed during this project.

(7) All activities pursuant to this agreement shall be in compliance with all applicable laws and regulations which prohibit discrimination on the basis of race, color, religion, sex, national origin, age, or disability.

(8) It is the expectation of the parties that all obligations of USARAK under this

agreement will be fully funded. Any requirement for the payment or obligation of funds by USARAK under the terms of this agreement shall be subject to the availability of funds. No provision herein shall be interpreted to require obligation of payment of funds in violation of any statute.

## **VII. PERIOD OF PERFORMANCE**

This agreement shall be effective upon the later signature and date entered below and shall remain in effect until September 30, 2002.

## **VIII. PROJECT OFFICERS**

### **A. USARAK Project Officer is:**

Mr. Douglas W. Johnson  
Chief, Environmental Resources Department  
Director of Public Works  
730 Quartermaster Road  
ATTN: APVR-RPW-EV (D. Johnson)  
Fort Richardson, AK 99505-6500  
Phone: (907) 384-3003  
Fax: (907) 384-3047

### **B. CEMML Project Officer is:**

Dr. Robert Shaw  
Center for Ecological Management of Military Lands  
Forest Sciences Department  
Colorado State University  
Fort Collins, CO 80523-1470  
Phone: (970) 491-2748  
Fax: (970) 491-2713

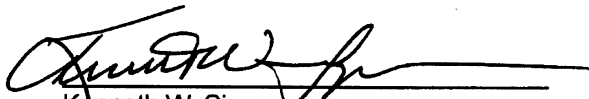
## IX. MODIFICATIONS/ TERMINATION

A. This agreement may be terminated by either party by providing written notice to the other party 60 days in advance of the proposed termination date. This agreement may be modified at any time by mutual consent as long as the modification is reduced to writing and signed by both parties.

B. Should CSU be unable to complete the project, all unexpended monies shall be returned to USARAK.

## X. SIGNATURE/APPROVAL

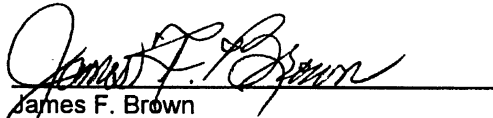
IN WITNESS WHEREOF, the parties hereto have caused this agreement to be executed as of the date herein written.



Kenneth W. Simpson  
Major General, U.S. Army  
Commanding Officer

24 JUL 1997

Date



James F. Brown  
Assistant Vice President for Research  
Colorado State University

8/4/97  
Date



**COOPERATIVE AGREEMENT  
BETWEEN  
U.S. ARMY ALASKA  
AND THE  
ALASKA DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF AGRICULTURE  
PLANT MATERIALS CENTER**

**1. PURPOSE:** A Cooperative Agreement between U.S. Army Alaska (USARAK) and the State of Alaska, Department of Natural Resources, Division of Agriculture, Plant Materials Center (PMC), is entered into for the purpose of enhancing, rehabilitating, and maintaining USARAK training lands at levels that will ensure their continued long-term use and effectiveness.

**2. GOAL:** To provide healthy and resilient environments that will continue to serve as high quality settings for military training.

**3. OBJECTIVES:**

- (a) Prevent or mitigate soil erosion
- (b) Improve water quality and increase long and short term effectiveness of said land? s use for military training purposes
- (c) Provide cover and concealment
- (d) Maintain natural biodiversity
- (e) Protect integrity of existing ecosystems

**4. AUTHORITY:** This agreement is entered into under the authority of 16 USC 670a thru f and 10 USC 2668 thru 2671, within the purview of Public Law 91-190, National Environmental Policy Act, 42 USC 4321, 4331, thru 4335, and 4341 thru 4347, the Sikes Act, Public Law 74-46, (16 U.S.C. 590 a.f.), Army regulation (AR) 200-3, AR 37-27, AR 200-1, CFR 265, and under the principle of multiple-use sustained-yield as explained in Public Law 86-517 (16 USC 528 thru 531).

**5. RESPONSIBILITIES:**

USARAK is responsible for restoring, conserving, and protecting the natural resources including vegetation and habitats on all Army administered lands in Alaska. This is being accomplished through the Army? s Integrated Training Area Management (ITAM) program, and to a large part through the Land Rehabilitation and Maintenance (LRAM) portion of the ITAM program.

The PMC in carrying out its assigned responsibilities under applicable legislation, desiring to test and evaluate plant materials used in the rehabilitation of applicable lands and streams, has limited resources to achieve the desired purposes.

USARAK has similar responsibilities and desires, but does not have all the technical expertise and equipment needed for achieving desired results.

It is the mutual desire of USARAK and the PMC to share resources to carry out their responsibilities to provide for the maintenance and improvement of vegetative resources on U.S. Army lands for the best interest of the people of Alaska and the United States. USARAK is willing to reimburse the PMC for providing material, equipment and technical assistance to accomplish this dual mission.

Therefore, it is mutually agreed as follows:

a. USARAK agrees:

(1) To provide project development criteria for these activities. In addition, USARAK will provide technical assistance where available and a general guideline of achievements necessary to carry out and complete the purpose of this agreement.

(2) To develop a scope of work for each project to be accomplished under this MOA.

(3) To issue a delivery order obligating funds to accomplish the work agreed upon and at the agreed upon price.

(4) To budget for the work project agreed upon.

(5) To reimburse the PMC for any supplies, equipment and personnel service costs (including salary, benefits, and leave accrual) and overhead cost (not to exceed 20 percent) associated with PMC personnel working under this agreement.

(6) To reimburse the PMC upon receipt of quarterly billing, 100 percent of all costs incurred. Maximum reimbursement will not exceed \$250,000 in one (1) year.

b. The PMC agrees:

(1) To provide technical assistance through employees or qualified agents who have the expertise necessary to carry out the purpose of this agreement. The assistance will include, but is not specifically limited to: (a) evaluation of growth rates and survival of selected herbaceous species for use as ground cover and for their soil erosion control characteristics; (b) development of propagation techniques that are necessary for production of selected vegetation types; (c) assessment and evaluation of plants to be used for visual concealment and mitigation properties; (d) development of erosion control structures; (e) layout, design, specification preparation and check-out of conservation practices; (f) provide the necessary engineering technical services to ensure that the reclamation/erosion control work being conducted by both USARAK and/or the PMC is being executed as required to prevent soil erosion and verify the long-term effectiveness of this portion of the LRAM program; (g) develop and publish installation specific revegetation and reclamation manuals; (h) develop self-help programs on Army installations in order to carry out construction activities; (i) develop training programs designed to train Army personnel in vegetation enhancement and/or control and stewardship of training lands; and (j) collect and increase native seed for commercial production and use on USARAK lands.



(2) To provide the use of necessary equipment and facilities the PMC has on hand, at no cost to USARAK, as needed to conduct the work projects associated with the agreement.

(3) To purchase additional equipment and materials that are required to carry out the purpose of the agreement. The equipment purchased under this agreement will be used jointly by PMC and USARAK personnel to complete the objectives of this agreement. USARAK will reimburse the PMC for the purchase price of additional equipment and materials necessary for project completion. All tools and equipment, but not supplies, purchased under this agreement exceeding \$50 per item will revert to USARAK upon termination of this agreement.

(4) To bill USARAK quarterly for costs as provided under the terms of this agreement. Billing statements should be addressed to:

Directorate of Public Works  
730 Quartermaster Road  
ATTN: APVR-RPW  
Fort Richardson, Alaska 99505-6500

c. Both parties agree:

(1) It is agreed that each party will assign a principal to execute this agreement and that a meeting between the assigned principals shall take place at least twice a year. The first meeting shall be no later than March 15 of each year to determine the project priorities and funding required for the next fiscal year. The second meeting shall occur no later than October 15 of each year to finalize project goals and funding for that fiscal year. Other meetings will be held as requested by either party. It is understood by both parties that available funding is not guaranteed and that no work can be started until funding has been sent. An annual operating plan will be submitted to the Chief of Environmental Resources Department and to the PMC not later than March 30 of each year for funding during the next fiscal year.

(2) It is agreed that USARAK will have ultimate authority to prioritize and determine what projects will be completed.

(3) To provide the opportunity for personnel from the cooperating agency to attend applicable training sessions, meetings, and conferences on a space available basis.

(4) No member of, or delegate to Congress shall be admitted to any share of this agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

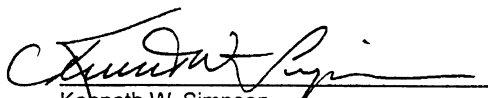
(5) The Comptroller General of the United States or his duly appointed representative and accredited representatives of the Alaska Department of Natural Resources or cognizant audit agency shall, until the expiration of this agreement, have access to all directly pertinent books, documents, papers, and records relating to USARAK's and the PMC's engagement in the performance of duties or involving any transactions relative to this agreement.

(6) Publication rights in academic journals and/or technical reports shall be jointly authored between PMC and USARAK personnel or singly by permission of the other cooperator. The intent is that the knowledge learned be shared with others to assist in research and applied applications of procedures developed during this project.

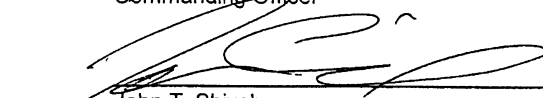
(7) The program or activities conducted under this agreement or memorandum of understanding will be in compliance with the nondiscrimination provision contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes; namely, section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, and the Age Discrimination Act of 1975.

(8) Although funds are not available beyond FY1997, it is the expectation of the parties that all obligations of USARAK under this agreement will be fully funded. Any requirement for the payment or obligation of funds by USARAK under the terms of this agreement shall be subject to the availability of funds. No provision herein shall be interpreted to require obligation of payment of funds in violation of any statute.

**6. EFFECTIVE DATE:** It is anticipated that this agreement is intended to be in effect for a minimum of five (5) years. This agreement shall become effective as of the date of the last signature hereon and will remain in effect until September 30, 2001. It may be renewed thereafter for additional terms of five (5) years by an exchange of correspondence. This agreement may be amended by mutual agreement of the parties in writing. It may be terminated by either party upon sixty (60) days written notice to the other party.

  
Kenneth W. Simpson  
Major General, U.S. Army  
Commanding Officer

31 March 1997  
Date

  
John T. Shively  
Commissioner  
Alaska Department of Natural Resources

4/5/97  
Date

**MEMORANDUM OF UNDERSTANDING**  
**REGARDING**  
**WATCHABLE WILDLIFE AND ECOTOURISM**  
**IN ALASKA**

among the

Alaska Department of Fish and Game  
Alaska Division of Parks and Outdoor Recreation  
Alaska Division of Tourism  
Alaska Department of Transportation and Public Facilities  
Alaska Marine Highway System

And

USDA Forest Service, Region 10  
Bureau of Land Management  
U.S. Fish and Wildlife Service, Region 7  
National Park Service  
National Marine Fisheries Service  
USDA Soil Conservation Service  
6th Infantry U. S. Army  
11th Air Force

and

National Audubon Society, Alaska-Hawaii Region  
National Wildlife Federation, Alaska Natural Resource Center  
The Nature Conservancy, Alaska Field Office  
Alaska Conservation Foundation

And

Alaska Visitors Association  
Alaska Tourism Marketing Council  
Alaska Society of Convention and Visitor Bureaus  
Alaska Wilderness Recreation and Tourism Association

## **I. BACKGROUND**

In December 1990, a Memorandum of Understanding (MOU) to ordinate development of a nationwide watchable wildlife program was signed by the International Association of Fish and Wildlife Agencies, eight federal agencies and four conservation organizations. A watchable wildlife program is defined here as a coordinated program to enhance public opportunities for sustainable low-impact wildlife-related recreation included viewing, photography, bird feeding, nature study and wildlife appreciation. This MOU is designed to expand the national effort within Alaska, by including agencies and groups pertinent to coordination for watchable wildlife and ecotourism within the state.

Wildlife-associated recreation is important nationwide and was identified as one of the nation's most popular outdoor activities by the President's Commission on Americans Outdoors in 1986. According to the National Survey of Fishing Hunting, and Wildlife-Associated Recreation reports from 1980 and 1985, wildlife watching (including viewing, photography, and feeding) is the fastest growing segment of wildlife-associated recreation. Participation increase from 93 million U.S. participants in 1980 to 135 million in 1985, which represents nearly 80% of the adult population.

Similarly, data from the World Tourism Organization show that wildlife-related tourism and conservation-based travel or ecotourism have significant economic value and are some of the fastest growing areas of the tourism market, both domestically and internationally. For the purposes of this MOU, ecotourism is defined as travel to natural areas that incorporates the natural history of the environment, and preserves the integrity of the environment, while producing opportunities that make the conservation of natural resources economically beneficial to local people.

The national recreation survey reported that 75% of Alaskans participate in residential or trip-related wildlife watching. In addition, tourism surveys in Alaska in 1985 and 1989 have documented that wildlife viewing and birdwatching were the activities with the highest level of participation by visitors in every region of the state, outranking sport fishing, hunting, hiking, flightseeing, or city tours. Ecotourism is gaining attention as the visitor industry in Alaska vies for a share of the world market.

Several states and Canadian provinces have recognized the value of developing a comprehensive and coordinated watchable wildlife program to enhance recreational opportunities for residents, to attract tourism, to educate the public about the value of wildlife, and to make conservation of wildlife habitat an economic asset. Alaska has the potential to develop a model watchable wildlife and ecotourism program based on unique wildlife, spectacular scenery, open space, and wilderness image.

## **II. PURPOSE**

The purpose of this MOU is to encourage partnerships, cooperation and coordination of sustainable watchable wildlife and ecotourism opportunities on federal, state and private lands. Such a cooperative arrangement has many benefits, including enhanced recreational, educational, conservation and economic opportunities. This agreement will enhance continuing efforts of pubic agencies and private organizations to conserve Alaska's valuable wildlife heritage, while also benefiting people.

### III. AUTHORITY

This MOU is made and entered into by and among the Alaska Department of Fish and Game; Alaska Department of Natural Resources, Division of Parks and Outdoor Recreation; Alaska Department of Commerce and Economic Development, Division of Tourism; Alaska Department of Transportation and Public Facilities; and Alaska Marine Highway System, hereinafter referred to as ADF&G, Parks, Tourism, DOT/PF, and AMHS, respectively; and the USDA Forest Service Region 10, Bureau of Land Management, U.S. Fish and Wildlife Service Region 7, National Park Service, National Marine Fisheries Service, USDA Soil Conservation Service, 6th Infantry U. S. Army, and 11th Air Force, hereinafter referred to as FS, BLM, FWS, NPS, NMFS, SCS, Army, and Air Force, under the provisions of the:

1. **BLM:** Federal Land Policy and Management Act of 1976, 43 U.S.C. # 1701-1782 (1988); an Act approved October 24, 1984, Pub. L. No. 98-540, 98 Stat. 2718.
2. **FWS:** Fish and Wildlife Act of 1956, 16 U.S.C. # 460k-2 (1988); Fish and Wildlife Conservation Act of 1980, 16 U.S.C. ## 2901 et seq (1988); and Fish and Wildlife Coordination Act, 16 U.S.C. # 661 (1988); '
3. **NPS:** National Park Service Organic Act of 1916, 16 U.S.C. # 1 (1988); # General Authorities Act of 1970, 84 stat. 825 (codified as amended at ## 16 U.S.C. ## 1a-1, 1a-2, 1c (1988)); Outdoor Recreation Act of 1963, 16 U.S.C. ## 4601-3 (1988), and National Historic Preservation Act of 1980, 16 U.S.C. ## 470 to 470w-6 (1988);
4. **FS:** Multiple Use Sustained-Yield Act of 1960, 16 U.S.C. ## 528-531 (1988); and Cooperative Funds Act of June 30, 1914, 16 U.S.C. #498 (1988);
5. **Army** (Civil Works): Flood Control Act of 1944, 16 U.S.C. #760d (1988); and Federal Water Project Recreation Act of 1965, 16 U.S.C. 4601-12 to 4601 to 4601-21 (1988); and
6. **Army** (Installations, Logistics, and Environment) **and Air Force:** Sikes Act, as amended, 16 U.S.C. ## 670a-670f (1988).
7. **SCS:** Conservation Operations, PL-74-46, 16 U.S.C. 590a.43); and
8. **SCS:** Resource Conservation and Development, PL.-74-46 and 87-703, 7 U.S.C. 1011.
9. **Parks:** A.S. 41.21.010 - .020 and A.S. 38.05.295.
10. **ADF&G:** A.S. 16.05.050(13).

### IV. INTRODUCTION

The participating parties to this agreement have responsibilities or interests in enhancing sustainable opportunities for the public in Alaska to observe wildlife in safe natural settings. The parties agree that increased effort should be made to: identify and publicize watchable wildlife opportunities on private and public lands; cooperate in providing facilities; provide interpretation and educational materials on wildlife biology and management; provide safe access to such sites where such activities are not harmful to wildlife or other resources; and that these effort should enhance wildlife conservation. The parties further recognize and agree that a cooperative approach should be followed whenever practical.

The ADF&G represents the wildlife agency with the responsibility for conserving and managing wildlife and providing opportunities for public use statewide. In this role, ADF&G will initiate and assist development of partnerships to enhance sustainable watchable wildlife opportunities in Alaska.

The participating state and federal agencies have a variety of responsibilities in managing their diverse lands and programs. Among some of these are the responsibilities to provide wildlife-associated recreation opportunities, and to ensure and manage the abundance and diversity of wildlife and their habitats. Even though these agencies have different mandates and policies, many opportunities exist to enhance development of sustainable watchable wildlife recreation and ecotourism.

One of the objectives of conservation and outdoor recreation groups in Alaska is to help perpetuate populations of wildlife on suitable lands, both public and private, for human enjoyment. These organizations, therefore, desire to participate with cooperating state and federal agencies and other private corporations and organizations by assisting in the development and implementation of sustainable watchable wildlife and ecotourism opportunities in Alaska.

Private corporations and organizations have interest in enhancing opportunities for watchable wildlife and ecotourism on public and private lands. Therefore, these organizations desire to participate with cooperating state and federal agencies, and conservation and outdoor recreation groups, to assist in developing and implementing sustainable watchable wildlife and ecotourism opportunities on public and private lands.

In summary, it is the mutual belief of the signatories that implementation of the MOU will:

- Provide enhanced washable wildlife opportunities in a sustainable manner for residents and visitors on private and public lands;
- Promote learning about wildlife and the conservation of land, water, and vegetation needed to maintain wildlife habitat;
- Provide economic benefits that will promote conservation of wildlife and habitat;
- Protect, maintain, and improve wildlife habitat to prevent depletion of any native species;
- Enhance federal and state wildlife management programs;
- Enhance support of wildlife resource conservation by Alaskan residents and visitors.

**V. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE SAID PARTIES THAT:**

1. ADF&G will be responsible for organizing an annual meeting among the cooperating parties and preparing and distributing an annual summary of program accomplishments to the competing organizations.
2. Each party will designate a representative to meet annually with representatives of the other participating agencies and organizations to discuss and reach agreement on program proposals to meet the purposes of this agreement.

3. Each land management agency will make available, where appropriate, public lands for the furtherance of this program, subject to applicable laws, regulations, policies and land use and activity plans for the affected area, and subject to approval by an authorized official of the agency administering the area involved.
4. Each land management agency will assume operation and maintenance and other management costs and responsibilities upon establishment of watchable wildlife sites and ecotourism areas located on respective agency lands, or may enter into agreements with appropriate organizations for such operation and maintenance.
5. All improvements placed on federal or state agency lands as a result of this cooperative initiative will become the property of the United States or the State of Alaska, respectively, and will be subject to the same regulations and administration of those lands as all other federal or state improvement of a similar nature.
6. Each land management agency will monitor, to the extent practicable, the effects of public use of watchable wildlife sites and ecotourism on their own land. Public use will be modified accordingly to avoid any unacceptable impacts to wildlife or other resources.
7. Any party may provide leadership for the planning, implementation, and monitoring of work undertaken pursuant to this agreement and supplement to this agreement.
8. Specific projects between or among any of the signatories, including transfer of funds, will be set forth in separate written agreements that specify the terms and conditions of such assistance and signed by the responsible officials.
9. Assistance provided by non-governmental organizations is intended to supplement state and federal funding, staff time, material, equipment, and/or service.
10. The binoculars symbol (national wildlife viewing area sign RG-210) will be used to enhance statewide visual recognition of designated watchable wildlife areas.
11. This agreement in no way restricts the cooperating agencies and organizations from participating with other public and private agencies, organizations, and individuals; or from accepting contributions and gifts for the improvement, development, administration, operation, and maintenance of watchable wildlife areas; or from developing watchable wildlife areas on their own appropriate lands; or from using the binocular symbol in washable wildlife projects developed outside the context of this MOU.
12. Nothing in this agreement will be construed as obligating the participating parties to expend, or involve the United States or the State of Alaska in any obligation for future payment of money, in excess of appropriations authorized by law and administratively allocated for these purposes.
13. The federal government's liability will be governed by the provisions of the Federal Tort Claims Act (28 U.S.C. 2671-80).
14. This agreement may be revised as necessary: by mutual consent of all parties, and by the issuance of a written amendment signed and dated by all parties.

15. Any party may terminate participation under this agreement by providing 60 days written notice. Unless terminated by written notice of all parties, this agreement will remain in force indefinitely, subject to a 5-year review.

16. Each party agrees that it will be responsible for its own acts and the results thereof and each party shall not be responsible for the acts of the other party, and each party agrees it will assume to itself risk and liability resulting in any manner under this agreement. .

17. No member of Congress shall be admitted to any share or part of the agreement or to any benefit that may arise therefrom.

18. Each party will comply with all applicable laws, regulations, and executive orders relative to Equal Employment Opportunity.

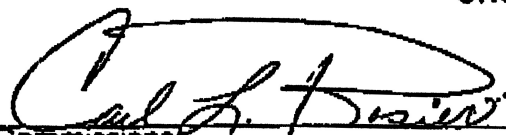
19. Nothing herein is intended to conflict with federal, state, or local laws or regulations. If there are conflicts, this agreement will be amended at the first opportunity to bring it into conformance with conflicting laws or regulations.

20. Policy and position announcements relating specifically to this cooperative program may be made only by mutual consent of the agencies.


#### VI. EFFECTIVE DATE

IN WITNESS WHEREOF, the parties hereto have executed this agreement as of the date first written above.


#### ORGANIZATIONS

  
\_\_\_\_\_  
Commissioner  
Alaska Department of Fish and Game 4/28/92

  
\_\_\_\_\_  
Director, Division of Wildlife Conservation  
Alaska Department of Fish and Game 4/29/92

  
\_\_\_\_\_  
Director, Division of Habitat  
Alaska Department of Fish and Game 4/29/92

  
\_\_\_\_\_  
Director, Division of Sport Fish  
Alaska Department of Fish and Game 4/30/92

  
\_\_\_\_\_  
Director, Division of Fisheries Rehabilitation, Enhancement, and Development  
Alaska Department of Fish and Game 4/30/92



Donald H. Munn 5-20-92  
Director  
Alaska Division of Tourism

William M. Hansen 11 AUG 1992  
Director  
Alaska Division of Parks and Outdoor Recreation

Jeff Scorgie 6-9-92  
Commissioner  
Alaska Department of Transportation and Public Facilities

James R. Pyles 5-21-92  
System Director  
Alaska Marine Highway System

Mike Barton 6/18/92  
Regional Forester  
USDA Forest Service

Charles O. Bucher 7/22/92  
Acting State Director  
Bureau of Land Management

Dan B. Allen 8/4/92  
Acting Regional Director  
Fish and Wildlife Service

John J. Hunsaker 8/12/92  
Regional Director  
National Park Service

Steven Penney 7/14/92  
Director  
National Marine Fisheries Service

[Signature] 8/28/92  
State Conservationist  
USDA Soil Conservation Service

Robert D. Shume 11/5/92  
Commander  
6th Infantry U. S. Army

Yankin Ballen  
Executive Director  
Alaska Natural History Association

10/12/94

Anthony Nakagawa 12-22-94  
Director, Division of Community and Rural Development  
Alaska Department of Community and Regional Affairs

## APPENDIX 7-5. Major Soil Series on Fort Richardson

Homestead series: Homestead silt loam is the most common type of soil on the post. It is a shallow, well-drained soil formed in loess over very gravelly drift on moraines and outwash plains. Terrain varies from level, to rolling, to strongly sloping. Permeability is moderate to moderately rapid. Runoff ranges from slow to very rapid, and the erosion hazard is slight to severe.

Purchases series: This moderately well-drained to somewhat poorly-drained silt loam is found on muskeg borders and slight depressions in glacial moraines. It has a surface layer of black silt loam and a subsurface layer of gray silt loam. The subsoil is mottled dark brown and the substratum grayish brown. It was formed in glacial till. Terrain is smooth to moderately sloping. Permeability is moderate to moderately slow in the more compact till. Available water capacity is low, and erosion hazard is low to moderate.

Kasilof series: This excessively drained silt loam is found on outwash plains and stream terraces. It was formed in a thin mantle of loess over very gravelly alluvium. The surface layer is dark gray silt loam. Subsoil is dark brown gravelly loam, and the substratum, dark olive gray, very gravelly sand. Runoff is slow to rapid, and erosion hazard is slight to severe. This soil series is a potentially severe threat for flash flooding.

Jacobsen series: This very stony silt loam is poorly drained and found in small valleys, shallow depressions, and low-lying areas bordering muskegs. It was formed in very stony glacial till. A typical soil profile has a peaty surface mat covering a black, very stony silt loam layer. Stones and cobbles make up about 40 percent of the volume, and gravel makes up about 20 percent. The water table is normally less than two feet below the surface. Permeability is moderate, and erosion hazard slight.

Doroshin series: This soil series is comprised of peat over a substratum of dark greenish gray silt loam. It is poorly drained and found in muskeg borders and depressions in glacial moraines. Permeability is moderate. Runoff is very slow to moderate, and erosion hazard slight.

Salmatof series: This soil is comprised of dark reddish brown coarse peat materials. It is very poorly drained and occurs in broad basins and depressions. The water table is usually near the surface.

Tuomi series: This silt loam soil is well drained and occurs on low moraines. The soil consists of silt loam over sandy loam and has moderate permeability. Runoff is slow to medium, and hazard of erosion slight to moderate.

Slikok series: This soil is a mucky silt loam occurring in valley bottoms and low areas around lakes or muskegs. The soil has a peaty surface layer. Terrain is nearly level. The soil has a high water capacity and a moderate permeability. Surface runoff and erosion hazard are moderate.

Caswell series: This series consists of coarse silt loam formed in silty and sandy waterlaid sediments over gravelly sand. It occurs on low terraces and in broad depressions. Water capacity is moderate, and permeability moderate to rapid. Surface runoff is slow, and erosion hazard is slight. The water table is normally two to four feet below the surface.

Clam Gulch series: This series consists of deep, poorly-drained silt loam that occurs in flood plains and in depressions in glacial moraines. It has dark silt over gray sediments that are high in clay. Water capacity is high, and the water table is often near the surface. Surface runoff is slow to rapid, and erosion hazard is slight to severe.

Chena series: This series consists of sandy-skeletal silt loam that is excessively drained. It occurs in alluvial fans and flood plains. The substratum contains 35 to 50 percent gravel and up to 10 percent cobbles. Permeability is moderate to rapid, and water capacity is low. Surface runoff is slow, and erosion hazard is slight.

Niklason series: This series is characterized by coarse silt loam occurring on flood plains and broad low-lying stream terraces. Soil is dark grayish brown silt loam and fine sand over gravelly sand. Water capacity is moderate to low, and permeability is moderate to rapid. Surface runoff is slow, and erosion hazard slight. This soil is susceptible to flooding, but is a good source of sand and gravel.

## APPENDIX 8-2: Fauna of Fort Richardson

**Mammals.** This list includes confirmed or probable species on Fort Richardson and Elmendorf AFB.

Scientific Name	Common Name	Habitat
<i>Microtus miurus</i>	Alaska (singing) vole	slopes
<i>Microtus pennsylvanicus</i>	meadow vole	meadow
<i>Microtus oeconomus</i>	tundra vole	alpine
<i>Clethrionomys rutilus</i>	northern redback vole	alpine, forest
<i>Synaptomys borealis</i>	northern bog lemming	
<i>Zapus hudsonius</i>	meadow jumping mouse	lowland
<i>Sorex hoyi</i>	pygmy shrew	forest, grassland
<i>Sorex palustris</i>	water shrew	streams
<i>Sorex monticolus</i>	dusky shrew	muskeg, forest
<i>Sorex cinereus</i>	common (masked) shrew	subalpine
<i>Sorex tundrensis</i>	tundra shrew	tamarack and spruce swamps
<i>Mus musculus</i>	house mouse	
<i>Mustela erminea</i>	shorttail weasel (ermine)	forest, brush
<i>Mustela nivalis</i>	least weasel	brush
<i>Marmota caligata</i>	hoary marmot	alpine
<i>Lepus americanus</i>	snowshoe (varying) hare	forest, brush
<i>Ochotona collaris</i>	collared pika	
<i>Spermophilus parryii</i>	arctic ground squirrel	alpine
<i>Gulo gulo</i>	wolverine	subalpine, forest
<i>Ursus arctos</i>	brown (grizzly) bear	alpine, subalpine
<i>Ursus americanus</i>	black bear	forests
<i>Canis latrans</i>	coyote	ubiquitous
<i>Canis lupus</i>	gray wolf	alpine, forest, muskeg
<i>Vulpes vulpes</i>	red fox	ubiquitous
<i>Lynx canadensis</i>	lynx	forest, muskeg
<i>Ovis dalli</i>	Dall sheep	alpine
<i>Alces alces</i>	moose	brush, forest
<i>Tamiasciurus hudsonicus</i>	red squirrel	forest
<i>Glaucomys sabrinus</i>	northern flying squirrel	forest
<i>Martes americana</i>	marten	forest
<i>Myotis lucifigus</i>	little brown bat	lowlands
<i>Castor canadensis</i>	beaver	streams, marshes
<i>Ondatra zibethicus</i>	muskrat	lakes, marshes, lowlands
<i>Mustela vison</i>	mink	lakes, streams, lowlands
<i>Lutra canadensis</i>	river otter	lowlands lakes, streams,
<i>Erethizon dorsatum</i>	porcupine	forests

Sources: Cook, J.A. and C.T. Seaton. 1996. *Checklist to the Mammals of Fort Richardson, Alaska*.

Gossweiler, W.A. 1984. *Fort Richardson Natural Resource Plan. Table 4.*

Elmendorf AFB. 1994. *Natural Resources Management Plan. Appendix E.*

**Fish:** This list includes species confirmed on both Fort Richardson and Elmendorf Air Force Base.

Scientific Name	Common Name
<i>Oncorhynchus gorbuscha</i>	pink salmon
<i>Oncorhynchus keta</i>	chum salmon
<i>Oncorhynchus kisutch</i>	coho salmon
<i>Oncorhynchus nerka</i>	sockeye salmon
<i>Oncorhynchus tshawytscha</i>	chinook salmon
<i>Salvelinus malma</i>	Dolly Varden
<i>Salvelinus alpinus</i>	arctic char
<i>Onchorynchus mykiss</i>	rainbow trout (stocked)
<i>Gasterosteus aculeatus</i>	three spine stickleback
<i>Pungitius pungitius</i>	nine spine stickleback^
<i>Cottus cognatus</i>	slimy sculpin^
<i>Thymallus arcticus</i>	arctic grayling

^ Confirmed on Elmendorf AFB only.

Sources: Gossweiler, W.A. 1984. *Fort Richardson Natural Resources Plan*. Table 4

Rothe, et al. 1983. *Natural Resource Inventory of Elmendorf Air Force Base, Alaska*.

#### **Amphibians and Reptiles:**

Scientific Name	Common Name
<i>Rana sylvatica</i>	wood frog

#### **Birds:**

Scientific Name	Common Name
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#### **LOONS, GREBES, PELICANS**

<i>Gavia immer</i>	common loon
<i>Podiceps grisegena</i>	red-necked grebe
<i>Podiceps auritus</i>	horned grebe
<i>Gavia arctica</i>	arctic loon
<i>Gavia stellata</i>	red-throated loon

#### **WATERFOWL**

<i>Cygnus columbianus</i>	tundra swan
<i>Cygnus buccinator</i>	trumpeter swan
<i>Anser albifrons</i>	greater white-fronted goose
<i>Chen caerulescens</i>	snow goose
<i>Branta canadensis</i>	Canada goose
<i>Anas platyrhynchos</i>	mallard
<i>Anas crecca</i>	green-winged teal
<i>Anas americana</i>	American widgeon
<i>Anas penelope</i>	Eurasian widgeon

<i>Anas acuta</i>	northern pintail
<i>Anas clypeata</i>	northern shoveler
<i>Anas discors</i>	blue-winged teal
<i>Anas cyanoptera</i>	cinnamon teal
<i>Aythya valisineria</i>	canvasback
<i>Aythya collaris</i>	ring-necked duck
<i>Aythya marila</i>	greater scaup
<i>Aythya affinis</i>	lesser scaup
<i>Bucephala islandica</i>	barrows goldeneye
<i>Bucephala clangula</i>	common goldeneye
<i>Bucephala albeola</i>	bufflehead
<i>Mergus merganser</i>	common merganser
<i>Histrionicus histrionicus</i>	harlequin duck
<i>Melanitta fusca</i>	white-winged scoter^

#### VULTURES, HAWKS & FALCONS

<i>Haliaeetus leucocephalus</i>	bald eagle
<i>Aquila chrysaetus</i>	golden eagle
<i>Circus cyaneus</i>	northern harrier
<i>Falco columbarius</i>	merlin
<i>Falco peregrinus</i>	peregrine falcon
<i>Falco sparverius</i>	American kestrel
<i>Buteo jamaicensis</i>	red-tailed hawk (Harlan's hawk)
<i>Buteo lagopus</i>	rough-legged hawk
<i>Accipiter striatus</i>	sharp-shinned hawk
<i>Accipiter gentilis</i>	northern goshawk

#### OWLS

<i>Aegolius acadicus</i>	northern saw-whet owl
<i>Aegolius funereus</i>	boreal owl
<i>Asio flammeus</i>	short-eared owl
<i>Bubo virginianus</i>	great horned owl
<i>Strix nebulosa</i>	great gray owl^
<i>Surnia ulula</i>	hawk owl

#### GALLINACEOUS BIRDS

<i>Lagopus lagopus</i>	willow ptarmigan
<i>Lagopus leucurus</i>	white-tailed ptarmigan
<i>Dendragapus canadensis</i>	spruce grouse

#### SHOREBIRDS

<i>Grus canadensis</i>	sandhill crane
<i>Charadrius semipalmatus</i>	semipalmated plover
<i>Charadrius vociferus</i>	killdeer
<i>Pluvialis squatarola</i>	blackbellied plover
<i>Pluvialis dominica</i>	lesser golden plover
<i>Limosa haemastica</i>	hudsonian godwit
<i>Numenius phaeopus</i>	whimbrel

<i>Tringa melanoleuca</i>	greater yellowlegs
<i>Tringa flavipes</i>	lesser yellowlegs
<i>Tringa solitaria</i>	solitary sandpiper
<i>Actitis macularia</i>	spotted sandpiper
<i>Phalaropus tricolor</i>	Wilson's phalarope
<i>Phalaropus lobatus</i>	red-necked phalarope
<i>Limnodromus griseus</i>	short-billed dowitcher
<i>Limnodromus scolopaceus</i>	long-billed dowitcher
<i>Gallinago gallinago</i>	common snipe
<i>Arenaria interpres</i>	ruddy turnstone
<i>Aphriza virgata</i>	surfbird
<i>Calidris pusilla</i>	semipalmated sandpiper
<i>Calidris mauri</i>	western sandpiper
<i>Calidris minutilla</i>	least sandpiper
<i>Calidris bairdii</i>	Baird's sandpiper
<i>Calidris melanotos</i>	pectoral sandpiper
<i>Calidris alpina</i>	dunlin

#### GULLS & TERNS

<i>Larus argentatus</i>	herring gull
<i>Larus canus</i>	mew gull
<i>Larus glaucescens</i>	glaucous-winged gull
<i>Larus philadelphia</i>	Bonaparte's gull
<i>Sterna paradisaea</i>	arctic tern
<i>Sterna aleutica</i>	aleutian tern^

#### KINGFISHER

<i>Ceryle alcyon</i>	belted kingfisher
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#### WOODPECKERS

<i>Picoides villosus</i>	hairy woodpecker
<i>Picoides tridactylus</i>	northern three-toed woodpecker
<i>Colaptes auratus</i>	northern flicker^
<i>Picoides arcticus</i>	black-backed woodpecker^
<i>Picoides pubescens</i>	downy woodpecker

#### PERCHING BIRDS

<i>Tachycineta bicolor</i>	tree swallow
<i>Tachycineta thalassina</i>	violet-green swallow
<i>Riparia riparia</i>	bank swallow
<i>Stelgidopteryx serripennis</i>	rough-winged swallow
<i>Hirundo pyrrhonota</i>	cliff swallow
<i>Corvus corax</i>	common northern raven
<i>Lanius excubitor</i>	northern shrike
<i>Passerculus sandwichensis</i>	savannah sparrow
<i>Melospiza lincolni</i>	Lincoln's sparrow
<i>Calcarius lapponicus</i>	lapland longspur
<i>Zonotrichia leucophrys</i>	white-crowned sparrow



<i>Melospiza melodia</i>	song sparrow
<i>Euphagus carolinus</i>	rusty blackbird
<i>Perisoreus canadensis</i>	gray jay
<i>Pica pica</i>	black-billed magpie
<i>Parus atricapillus</i>	black-capped chickadee
<i>Parus hudsonicus</i>	boreal chickadee
<i>Cinclus mexicanus</i>	American dipper
<i>Turdus migratorius</i>	American robin
<i>Ixoreus naevius</i>	varied thrush
<i>Catharus guttata</i>	hermit thrush
<i>Catharus ustulatus</i>	Swainson's thrush
<i>Regulus calendula</i>	ruby-crowned kinglet
<i>Anthus spinoletts</i>	water pipit
<i>Bombycilla garrulus</i>	bohemian waxwing
<i>Vermivora celata</i>	orange-crowned warbler
<i>Dendroica tigrina</i>	myrtle warbler
<i>Dendroica striata</i>	blackpoll warbler
<i>Seiurus noveboracensis</i>	northern waterthrush
<i>Wilsonia pusilla</i>	Wilson's warbler
<i>Pinicola enucleator</i>	pine grosbeak
<i>Acanthis flammea</i>	common redpoll
<i>Junco hyemalis</i>	dark-eyed junco
<i>Certhia americana</i>	brown creeper^
<i>Loxia leucoptera</i>	white-winged crossbill^
<i>Corvus caurinus</i>	northwestern crow^
<i>Columba livia</i>	rock dove^
<i>Empidonax alnorum</i>	alder flycatcher^
<i>Contopus borealis</i>	olive-sided flycatcher^
<i>Contopus sordidulus</i>	western pewee^
<i>Cyanocitta stelleri</i>	stellar jay^
<i>Regulus satropa</i>	golden-crowned kinglet^
<i>Sitta canadensis</i>	red-breasted nuthatch^
<i>Carduelis flammea</i>	common redpoll^
<i>Carduelis hornemanni</i>	hoary redpoll^
<i>Carduelis pinus</i>	pine siskin^
<i>Spizella arborea</i>	American tree sparrow^
<i>Passerella iliaca</i>	fox sparrow^
<i>Zonotrichia atricapilla</i>	golden-crowned sparrow^
<i>Catharus minima</i>	gray-cheeked thrush^
<i>Dendroica petechia</i>	yellow warbler^
<i>Dendroica coronata</i>	yellow-rumped warbler^

^ Confirmed on Elmendorf AFB only

#### Sources:

Gossweiler, W.A. 1984. *Fort Richardson Natural Resources Plan*. Table 4

CH2M Hill, 1994. *Comprehensive Evaluation Report, Eagle River Flats, Fort Richardson, Alaska*. Table 2-5.

Elmendorf AFB. 1994. *Natural Resources Management Plan*. Appendix E.



## APPENDIX 9-2: Eagle River Water Sample Data

Unit:	Temp °F	pH	Conductivity uS	D.O. ppm	Fecal Coliform #/100 ml	Nitrate mg/L	Nitrite mg/L	Turbidity NTU	TPH mg/L	Time
<b>May 26, 1995</b>										
Campground	39.1	6.28	82.3	11.1	92	0.62	<MDL	42	<MDL	09:45
Bailey Bridge	38.8	6.88	86.0	10.8	36	0.53	<MDL	36	<MDL	11:45
Take-out	39.1	6.28	86.8	10.8	48	0.64	<MDL	37	<MDL	10:47
<b>August 30, 1995</b>										
Campground	42.2	8.78	89.3	13.3		0.11	<MDL	33	<MDL	12:00
Bailey Bridge	42.4	8.65	87.7	10.3	2	0.14	<MDL	32	<MDL	11:30
Take-out	42.7	8.29	86.2	8.5	4	0.15	<MDL	31	<MDL	10:35



## APPENDIX 10-1d: Description of Fort Richardson Training Areas

Training Area	Acres	Size Unit	Area Characteristics
1	6,813	Company	Subalpine zone, forest with hills, marshes, sand and gravel, tidal influence along coast
2	2,492	Platoon	Alpine, treeless bogs, subalpine zones with hills, marshes, small lakes, some dense forests, glacial
3	1,195	Platoon	Treeless bog, spruce bog, forest, marsh, glacial till
4	836	Platoon	Interior forest, subalpine zones with hills, glacial till
5	1,257	Company	Interior forest, hills, glacial till, Eagle Flats Impact Area on west
6	1,010	Platoon	Forest, glacial till
7	2,182	Platoon	Forest with many landing zones, improved roads, fossil creek, chemical disposal area
8	2,244	Platoon	Alpine, forest with hills, marshes, good access
9	1,330	Platoon	Alpine, treeless bog, spruce bog, interior forest with Otter Lake, marshes, Gwen and Kiowa lakes, Eagle River Flats on north
10	1,072	Platoon	Spruce bog, forest with ranges and landing zones, coastal reach, western post boundary
11	5,110	Platoon	Treeless bog, spruce bogs, forest, alpine zone with major range complex, drop zone, golf course, Nike site, major elevation changes
12	6,444	Platoon	Treeless bogs, spruce bogs, forest, alpine zone flat and marshy in west with steep mountains in east, Ship Creek
13	2,937	Platoon	Spruce bogs, forest, alpine zone

Training Area	Acres	Size Unit	Area Characteristics
14	5,208	Company	Barrens, forest, alpine zone
15	2,768	Platoon	All with dense forest, steep slopes in east, long snow cover
16	500	National Guard	Dense spruce forest

## APPENDIX 12-6a: Fort Richardson GIS Databases

The following is a listing of Fort Richardson data layers available through the Geographic Information System (GIS).

- ammunition area location
- airstrip location and tarmac
- bald eagle nesting sites
- various landmark structures
- post boundary
- cantonment area
- cross country maneuverability - summer, winter, break-up
- USGS contour lines
- concealment - summer, winter
- drop zones
- digital elevation model
- environmental pre-approval areas
- various firing fans
- firing points
- UTM grid 1000m interval
- lands previously managed by Fort Richardson
- impact areas
- lakes
- military land use
- landing zones
- old growth vegetation
- observation points
- Fort Richardson land ownership
- ranges
- roads - USGS
- roads - DMA
- railroads
- streams
- training area
- trafficability - summer, winter, break-up
- major utility corridors
- vegetation
- wetlands
- archeology sites

We hope to add the following data layers over the next five years.

- bench marks
- buildings
- fire breaks
- historic impact areas
- satellite imagery
- training area accident locations
- air corridors
- noise limitation area
- pyro limitation area

fording sites  
field kitchen / mess sites  
gates with key number  
hardened training sites  
heavy equipment transport site  
land navigation courses  
laundry & bath sites  
loading ramps  
maneuver corridors  
maneuver lanes  
MOAs  
no overflight area  
NOE training area  
POL site  
potable water location  
range facility / target location  
ROWPU approved sites  
telephone / MAG sites  
trash collection site  
water training areas  
fire management areas  
fire hydrants  
flood plains  
landfills  
power lines  
towers / antennas  
schools / hospitals / fire departments within 25 miles of post  
wells and monitoring wells  
cemeteries  
fire history  
game management / hunting areas  
hazardous material location  
rebuked / pest management areas  
historic vegetation  
noxious weed infestations



## APPENDIX 12-6c(1)(b): GIS Hardware and Software

### Hardware

#### GIS

- Sun Station 4/110
- Sun SPARCstation 2
- Sun GAM-1604015
- Wyse WY 50
- Sun GAM-1962B
- Epson LX-810
- Sun SPARCprinter
- Hewlett-Packard HP-GL/2 Language
- Hewlett-Packard DraftPro Plus
- Telebit T2500
- Sun 8mm Tape Drive
- 2 Sun 1/4" Tape Drives
- Sun 1.2G External Hard Drive
- Artecon DSU EOD External Hard Drive
- Sun CD-ROM
- Altek ACT-36048-1NB Digitizer

#### GPS

- 3 Magellan GPSs
- 2 Motorola GPSs

### Software

- GRASS (Geographic Resources Analysis Support System), Version 4.1
- UNIX
- SunOS 4.1.3
- Solaris 1.1 (CD)
- Backup Copilot 1,0 (CD)
- Informix-SE 5.02 UC1
- Informix-SQL 4.11 UC1
- Informix-4GL RDS 4.11 UC3
- ArtePort VI.6a



## APPENDIX 14-4a(1): Moose Harvest for Fort Richardson, Alaska

Year	#Permits	Harvest	%Success
1987		60	57
1988		71	68
1989		73	71
1989-90	125	68	54
1990-91	150	59	39
1991-92	100	82	82
1992-93	100	52	52
1993-94	100	49	49
1994-95	100	51	51
1995-96	100	40	40
1996-97	110	36	33



## APPENDIX 14-15b(5): Joint Management of Bear/Human Conflicts on Military Lands Near Anchorage, Alaska

MEMORANDUM OF AGREEMENT  
BETWEEN  
U.S ARMY ALASKA, FORT RICHARDSON  
AND  
U.S. AIR FORCE, ELMENDORF AIR FORCE BASE  
AND  
ALASKA DEPARTMENT OF FISH AND GAME  
AND  
U S. DEPARTMENT OF AGRICULTURE, ANIMAL DAMAGE CONTROL

SUBJECT: Joint management of bear/human conflicts on military lands near Anchorage, Alaska.

1 . PURPOSE: The primary objective of this Agreement is to establish the authority to jointly manage bear populations on multi-jurisdictional lands, including military lands, within the Anchorage Bowl. The ultimate goal is to further public safety and education while maintaining black and brown bear populations and their natural habitats within this area.

2. REFERENCE: In accordance with the authority contained in Public Law 86-797, September 15, 1960, as amended in Public Law 93-452 in 1974; Title 10, U.S. Code, Section 2671, February 28, 1958; Title 16, Alaska Statutes; the Economy Act (31 U.S.C. 1535); and the Fish and Wildlife Coordination Act of 1956; the Anchorage Regional Supervisor, Alaska Department of Fish and Game; the Post Commander, Fort Richardson; the Base Commander, Elmendorf Air Force Base and the State Director, U.S. Department of Agriculture, Animal Damage Control (USDA) mutually agree to the provisions of this agreement.

3. INTRODUCTION AND BACKGROUND: This Memorandum of Agreement (MOA) establishes a plan of coordination and cooperation between the Alaska Department of Fish & Game (ADF&G), U.S. Army Alaska, Fort Richardson (FRA) and U.S. Air Force, Elmendorf Air Force Base (EAFB) for management of bear/human encounters on military lands that may lead to public health and safety problems or to situations which may become controversial. This agreement is necessary due to these military lands being surrounded by the largest urban population in the State of Alaska, i.e., the City of Anchorage on the south and the communities of Eagle River, Chugiak, Birchwood, and Peters Creek on the north. Further, bear/human conflicts in the Fort Richardson cantonment and housing area during the summer of 1995 have heightened the need for this Agreement.

4. AGREEMENTS. SUPPORT AND RESOURCE REQUIREMENTS:

- a. Staff support rendered by the ADF&G, EAFB, and FRA to this agreement will be provided on a non-reimbursable basis. Major cost items such as telemetry equipment and air time may require joint funding, USDA will provide technical support on a case-by-case basis. Such support shall be reimbursable.
- b. Authorized agents and employees of the ADF&G and/or USDA who require access to military lands on FRA and EAFB in execution of this agreement will be granted such access unless security considerations, military emergency, or training mission should

prevent granting of such access. Authorized agents and employees of the Air Force and Army who require access to each other's military reservations will also be granted such access. In so far as possible, agents and employees will notify the agency whose lands are being accessed, prior to access.

- c. Military personnel assisting with bear management activities on non-DoD property shall be acting as agents of, and under the direct supervision of ADF&G personnel.

#### Section I. Mutual responsibilities:

- a. Establishment of a Joint Human/Wildlife Conflict Management Advisory Board (Board). The Board will be comprised of at least one voting representative from ADF&G FRA and EAFB. USDA shall serve as an advisory, non-voting member of the Board. The Board will meet bi-annually at a minimum, but also at any time as deemed necessary by any party to this Agreement. The Board is responsible for addressing such issues as:

- 1) Develop a joint management plan for black and brown bear populations on military lands.

- 2) Make recommendations and develop procedures, as necessary, for joint management of other wildlife/human conflict issues such as nuisance wildlife, furbearers, moose, etc.

- 3) Make recommendations concerning public education on wildlife/human conflict issues.

- 4) Appoint an individual to develop joint operating procedures for the Joint Bear Response Team.

- 5) Make recommendations concerning bear management issues and resolution of bear/human conflicts on military lands within the Anchorage Bowl, with FRA and EAFB each having authority to approve or veto such recommendations for lands under their respective jurisdiction. Recommendations shall be made in accordance with the following general guidelines:

- a. Nuisance bears are those attracted to garbage or to human food sources.
    - b. Problem bears are those which frequent housing or other developed areas, or those which exhibit aggressive tendencies towards people.
    - c. Dispatch of nuisance or problem animals may be done only with the concurrence of ADF&G. A depredation permit may be required. These requirements do not apply to animals which must be dispatched in defense of life. Animals dispatched in defense of life become the property of the state. Meat, or, in the case of bears, hide and skull, must be salvaged and turned in to the state.

1. Dispatch of nuisance animals is a last-resort situation. Other possible alternatives include aversive conditioning and relocation.
  2. Dispatch should be considered for animals which are aggressive with people or for bears with an extensive history of garbage or nuisance behavior, which have not responded to previous attempts at aversive conditioning and/or relocation.
  3. Decisions concerning relocation or dispatch of nuisance animals should be made on a case-by-case basis, and be based on the individual animal's past history.
  4. A nuisance or problem bear will be moved off of FRA or EAFB only with the concurrence of the Alaska Department of Fish and Game.
- b. A combination of all the possible wildlife control options shall be subject to an annual cap on total bears removed from the population by human causes. This annual cap shall be determined by the Joint Management Advisory Board, and shall be considered when a single option is not viable due to numbers of bear reports or other circumstances.
- c. Fort Richardson and Elmendorf Air Force Base shall be individually responsible with respect to each entity's jurisdiction for garbage management and enforcement of state and military regulations concerning food storage, garbage, and feeding of bears.
- d. Elmendorf Air Force Base and Fort Richardson shall each be responsible for developing compatible bear management plans which recognize the options for differing management on the fort and base.

## SECTION II. General Mutual Aid Provisions:

- a. The parties to this Agreement will assist each other to the best of their ability with additional personnel and/or equipment on an as-requested basis.
- b. A Joint Bear Response & Handling Team will be formed. Initial responders to problem bear complaints will include Military Conservation Agents from the Air Force and Game Warden MP's from the Army. Initial responders will assist each other as necessary in order to minimize response times and ensure public safety. The Bear Handling Team will be comprised of at least two trained biologists or technicians from each agency. The Joint Bear Response Team will be available primarily to assist with bear problems on military lands, however, it may also be used to assist with bears in the Anchorage area that have been marked and/or collared as a part of the on-going bear study. Military personnel assisting with bears on non-DoD) lands will be under the direct supervision of state personnel,

## SECTION III. Responsibilities of Alaska department of Fish & Game (ADF&G):

The ADF&G is primarily responsible for providing technical expertise on an as- needed basis. Additionally, ADF&G will ensure bear safety and protection of the public safety by overseeing the maintenance of a viable bear population in the Anchorage area. Specifically ADF&G:



- a. Will be responsible for the issuance of any required depredation permits.
- b. Will provide two (2) biologists or trained technicians to the Joint Bear Response team. Biologists will primarily be available for technical advice, but may in exceptional circumstances be requested to assist in the field with particular problem bears.
- c. Approve/disapprove requests for relocation or dispatch of nuisance or problem animals.
- d. ADF&G shall be responsible for supervising any Joint Bear Response Team when operating on non-DoD lands.

#### SECTION IV. Responsibilities of U.S. Army. Alaska. Fort Richardson (FRA):

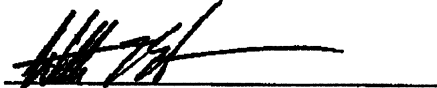
- a. Personnel from the Military Police Game Warden Section will provide initial response to bear problems, will assist in identifying nuisance or problem bears, and will conduct aversive conditioning techniques. Personnel must attend the annual Joint Bear Response Team training session.
- b. Public Works' Natural Resources Branch will provide at least two (2) biologists or technicians who will be trained in darting and handling techniques. These individuals will be the Fort Richardson representatives on the Joint Bear Handling Team.
- c. Develop bear management policies and plans for Fort Richardson lands.
- d. Coordinate with ADF&G concerning relocation or dispatch of nuisance or problem animals.

#### SECTION V. Responsibilities of U.S. Air Force, Elmendorf Air Force Base (EAFB):

- a. The Base Conservation Office is responsible for conducting the on-going bear study, to include trapping of nuisance bears and conducting winter den checks. They are also responsible for providing an annual report to the various agencies involved in bear management in the Anchorage Bowl.
- b. The Base Conservation Office will provide at least one (1) biologist and two (2) technicians trained in darting and handling techniques. These technicians will be assigned to the Joint Bear Response Team and provide darting and bear handling support during both duty and non-duty hours (nights and weekends).
- c. Military Conservation Agents working out of the Base Conservation Office will act as initial responders to all bear complaints on Elmendorf AFB. and are available to act as first responders for bear problems on Fort Richardson.
- d. The Base Conservation Office, with technical assistance from ADF&G, will conduct annual training sessions for the Joint Bear Response Team. This training will be conducted in March and April of each year.
- e. Develop bear management policies and plans for Elmendorf Air Force Base lands; and notify HQ PACAF when bears must be destroyed on base.

6. EFFECTIVE DATE: This Agreement is effective on the date subscribed by the last signatory and continues in full force and effect until revised or terminated upon the written mutual consent of all the parties to the Agreement or terminated by any of the parties to this Agreement.

7. REVIEW: Participating agencies will review this Agreement annually, to update and make changes as needed. Amendments or additional appendices may be developed and implemented by mutual agreement at any time.



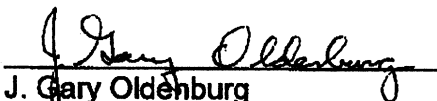
William T. Edens  
LTC, IN, USA  
Post Commander

10 June 96  
Date



RICHARD C. STROM, Col, USAF  
Commander, 3rd Support Group

JUL 29 1996  
Date



J. Gary Oldenburg  
State Director, WA/HI/AK/  
Pacific Islands  
USDA-APHIS-ADC

8/20/96  
Date



Jeffrey H. Hughes  
Regional Supervisor  
AK Department of Fish and Game

5 Aug 96  
Date

## **ORGANIZATIONAL FLOW CHART**

### **JOINT ADVISORY BOARD**

-Responsible for making management recommendations

#### **FRA Natural Resources**

#### **EAFB Natural Resources**

-Accepts or rejects recommendations

-Establishes policy for won lands and makes management plans and decisions accordingly

### **JOINT BEAR TEAM**

-Responsible for implementing management plans and policies through conduct of bear response and field work

#### **INITIAL RESPONSE**

MCA's (EAFB) 10 personnel

Game Warden MP's 5 personnel

#### **BEAR HANDLING TEAM (Minimum)**

Wildlife Biologist (EAFB) 1

Wildlife Technicians (EAFB)

Wildlife Biologist or  
Technicians (FRA) 2

Wildlife Biologist or  
Technicians (FRA) 2

NOTE: USDA Animal Damage Control personnel may assist upon request, on a case-by-case basis.



## APPENDIX 20-2: Federal Laws, Regulations, Executive Orders, Directives, and Policies

### FEDERAL LAWS

Americans with Disabilities Act of 1990 (PL 101-336; 42 USC 12101)

- ▶ Policy to ensure access, to the maximum extent possible, for persons with disabilities. Notes that wilderness areas are not intended included under this act. Some provisions are made maintaining historic structures.
- ▶ Penalties are enforced under 29 USC 794a dealing with citizen suits.

Antiquities Act of 1906 (PL 59-209; 16 USC 431-433)

- ▶ Policy providing for the preservation of historic and prehistoric sites on federal lands. Prohibits taking, excavation, or other destruction of sites.
- ▶ Penalties: Misdemeanor charges with fines up to \$500 and/or 90 days imprisonment.

Archaeological and Historic (Data) Preservation Act Of 1974 (PL 93-291; 16 USC 469 et seq.) (AKA Archeological Recovery Act and Reservoir Salvage Act of 1960) (PL 86-523; 16 USC 469)

- ▶ Policy to protect and preserve any historic and archaeological data collected from sites which would otherwise be lost or destroyed as a result of any federally funded or licensed activity or program. Additionally, this act provides that up to one percent of project funds may be appropriated to conduct data recovery.
- ▶ No penalties are directly associated with this act.

Archaeological Resources Protection Act of 1979 (PL 96-95:16 USC 470aa-11)

- ▶ Policy to prohibit the sale, purchase, exchange, transport or receipt of any archeological resource if that resource was taken from public or Indian lands or in violation of state or local law. Vandalism, alteration, or destruction of historic and prehistoric sites are also covered under this act.
- ▶ Penalties - Criminal: Up to \$20,000 and/or 2 years imprisonment, for first offense, \$100,000 and/or 5 years imprisonment for second offense. Civil: Forfeiture of vehicles and equipment used in illegal activities. Forfeiture of illegally obtained artifacts.

Bald and Golden Eagle Protection Act of 1984 (16 USC 668-668d)

- ▶ This act prohibits the taking, possession, transaction, and transport of bald and golden eagles. Exemptions may be authorized by the Secretary of the Interior.
- ▶ Penalties - Criminal: Fines up to \$5,000 and/or 1 year imprisonment Fines and prison terms doubled for second offense. Civil: Fines up to \$5,000 per violation. Loss of federal lease rights, and confiscation of vehicles used in the violation of this law.

#### Clean Air Act (42 USC 7401-7642)

- ▶ Policy to prohibit, limit, and regulate the emission of dangerous and noxious pollutants into the environment.
- ▶ Penalties - Criminal: Up to \$250,000 and/or 5 years imprisonment for first offense. \$500,000 and/or 10 years imprisonment for second offense. Corporations are subject to fines up to \$500,000 for first offense. Knowing endangerment is punishable by fine under Title 18 and/or 15 years imprisonment for an individual and \$1,000,000 for a corporation. Penalties are doubled for second offenses.

#### Clean Water Act of 1977 (33 USC 1251-1387)

- ▶ This act stipulates effluent standards for the discharge of pollutants into navigable waters of the U.S. Promotes research at the federal and state levels concerning issues of water pollution.
- ▶ Penalties - Criminal: Negligent violations, fines up to \$25,000 per day of violation and/or up to one year imprisonment. Doubled for repeat offenders. Knowledgeable violations, fines up to \$50,000 per day of violation and/or up to three years imprisonment. Doubled for repeat offenders. Knowledgeable endangerment, fines up to \$230,000 and/or up to fifteen-year imprisonment. If violator is an organization, fines up to \$1,000,000. Doubled for repeat offenders. Civil: Accidental violation, fines up to \$50,000. Willful violation, fines up to \$250,000. Owners or operators of vessels or facilities may be liable for clean-up costs up to the amount of \$30,000,000. Citizen Suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violations of this act.

#### Coastal Zone Management Act (PL 92-583; 16 USC 1451 et seq.)

- ▶ Policy to preserve, protect, develop, restore, and enhance the nation's coastal zones. Provides funding opportunities to accomplish this goal. Establishes the Walter B. Jones excellence in coastal zone management awards. Also established the National Estuarine Research System.
- ▶ No penalties are directly associated with this act.

#### Comprehensive Environmental Response, Compensation and Liability Act (CERCLA and SARA) of 1980 (42 USC 9601-9675)

- ▶ Policy which defines liabilities for damage or destruction of the environment. The DOD can be held liable for releases damaging the environment. Limits on fines do not limit liabilities in regards to actual clean-up costs.
- ▶ Penalties - Civil fines up to \$5 million for vessels carrying hazardous wastes (\$50 million for an incineration vessel). Civil fines up to \$30 million for a motor vehicle, aircraft, pipeline, or rolling stock, but no less than \$5 million. Civil fines up to \$50 million for any facility

#### Conservation and Rehabilitation Program on Military and Public Lands (PL 93-452)

- ▶ Policy to set up and maintain conservation and rehabilitation programs on military and public lands. The goal is to preserve areas for natural resources. Provides funding and policy guidance for programs. Allows for imposing fines on individuals who violate regulations for land use. \$1,000 for hunting and fishing without appropriate permit. \$500 for violation of other regulations.

#### Conservation Programs on Military Installations (AKA Sikes Act) (PL 86-797; 16 USC 670 et seq.)

- ▶ Policy to develop land areas for habitat improvement and outdoor recreation. Allows for permitting of hunting and control of off-road vehicles. No fines on military reservations.

Emergency Planning and Community-Right-to-Know Act of 1986 (42 USC 11001-11050)

- ▶ Policy to inventory and report holdings of hazardous materials. Also, to report releases of hazardous materials within specified time frames. Some limitations on liability of governmental entities.
- ▶ Penalties - Criminal: \$25,000 per day in violation, up to 2 years imprisonment. Civil: \$25,000 per day in violation. Citizen Suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violation of this act.

Emergency Wetlands Resources Act of 1986 (16 USC 3901-3932)

- ▶ This act is intended to promote the conservation of wetlands and to comply with international obligations of migratory bird treaties.
- ▶ No penalties are associated with this act.

Endangered Species Act of 1973 (PL 93-205; 16 USC 1531-1543)

- ▶ Policy to protect any species (fish, wildlife, or plants) listed on the endangered species and the threatened species list from hunting, taking for importation, or exportation to or from the United States. Establishes the endangered and threatened species list.
- ▶ Penalties - Criminal: Fines up to \$25,000 and/or 1 year imprisonment. Civil: Fines up to \$10,000 for violation of this act. Forfeiture of any fish, wildlife, plants taken and equipment and vehicles used in violation of this act.

Environmental Quality Improvement Act of 1970 (42 USC 4371-4375)

- ▶ Establishes the Office of Environmental Quality. This office is tasked with the goal of enhancing environmental quality via research on negative human impacts on the environment. Also, responsible for coordinating various efforts of federal agencies engaged in minimizing the impact of their missions.
- ▶ No penalties are associated with this act.

Erosion Protection Act (33 USC 426e-426h)

- ▶ Provides funding mechanism for specific erosion protection projects. Each project must be approved by Congress, the Board on Coastal Engineering Research, or by the Chief of Engineers of the U.S. Army.
- ▶ No penalties are associated with this act.

Estuary Protection Act of 1968 (PL 90-454; 82 Stat 625; 16 USC 1221)

- ▶ Policy to protect, conserve, and restore the nation's valuable estuaries in a manner that adequately and reasonably maintains a balance between the national need for such protection of estuaries and the need for growth and development of these areas.
- ▶ No penalties are directly associated with this act.

#### Federal Facilities Compliance Act of 1992 ( USC )

- ▶ This act amends the Resource Conservation and Recovery Act (RCRA, 42 USC 6961) so that the FFCRA waives sovereign immunity in RCRA cases. The act allows the EPA Administrator to enforce RCRA provisions for violations by federal agencies. Requires annual inspections of federal facilities. All fees or fines assessed against any federal agency must be paid out of that agency's standard appropriation.
- ▶ No penalties are directly associated with this act.

#### Federal Insecticide, Fungicide and Rodenticide Act (7 USC 136-136y)

- ▶ Policy and relations pertaining to the usage of pesticides. Dealing mostly with applications, labeling, and banned products. Provides penalties for improper usage.
- ▶ Penalties - Criminal: Commercial - Fines up to \$25,000 and/or 1 year imprisonment; Private - Fines up to \$1000 and/or 30 days imprisonment. Civil: Commercial - Fines up to \$5000; Private - Fines up to \$1000.

#### Federal Land Policy and Management Act (43 USC 1701-1784)

- ▶ Policy regarding the management of federal lands.
- ▶ No penalties are directly associated with this act.

#### Federal Water Pollution Control Act (AKA Clean Water Act) (33 USC 1251-1376)

- ▶ Policy to protect U.S. water resources from pollution and to find ways to improve conditions. The act provides funding opportunities for research and development of water resources and sets standards and limits for effluent releases into water resources. Includes issues of dredge and fill, hazardous wastes, oil spills, etc.
- ▶ Penalties - Criminal: For individuals under negligence, fines range from \$2500 - \$25,000 per day of violation and/or 1 year imprisonment. Knowing violation fines range from \$5000 - \$50,000 per day of violation and/or 3 years imprisonment. Knowing endangerment fines are up to \$250,000 and/or 15 years imprisonment. Fine and prison term are doubled for second offense. For vessels, unknowing violations are \$50,000 plus clean-up costs up to \$250,000. For vessels, knowing violations are \$250,000 plus full clean-up costs. For facilities, fines up to \$50 million plus full clean-up costs for knowing violations. Civil: \$10,000 per day of violation, injunctions. Citizen suits: Any citizen may bring suit against any person, the U.S. government, or governmental agency for violations of this act.

#### Federal Water Project Recreation Act to 1965 (PL 89-72; 79 Stat 213; 16 USC 460[1]-12 to 460[1]-21)

- ▶ Policy to include recreation and fish & wildlife considerations in any water resources project. Discusses methods of funding.
- ▶ No penalties are directly associated with this act.

#### Fish and Wildlife Conservation Act of 1980 (FL 96-366; 16 USC 2901)

- ▶ Policy to promote fish and wildlife conservation. The act provides for funding of conservation programs.
- ▶ No penalties are directly associated with this act.



Fish and Wildlife Coordination Act (PL 85-624; 16 USC 661 et seq.)

- ▶ Policy to elevate the protection of wildlife resources to the status of water resource protection. Provides authority to Secretary of the Interior to provide assistance to other agencies, state and local governments, and public and private organizations to develop, stock, rear, and protect all species of wildlife and their habitats. Provides specific protection for bald and golden eagles and for endangered species of fish and wildlife.
- ▶ Penalties - Criminal: Fines up to \$5000 and/or 1 year imprisonment. Fines and prison terms are doubled for second offense. Civil: Fines up to \$5000 per offense, each violation is considered a second offense.

Forest and Rangeland Renewable Resources Planning Act of 1974 (16 USC 1601 et seq.)

- ▶ Policy for forest and rangeland management.
- ▶ No penalties are directly associated with this act.

Hazardous Materials Transportation Act (42 USC 1801 et seq. changed title to 49 USC 1471)

- ▶ Policy to restrict the transportation of hazardous materials.
- ▶ Penalties - Criminal: Fines up to \$25,000 and/or 5 years imprisonment. Civil: Fines up to \$50,000.

Historic Sites Act of 1935 (PL 74-292; 16 USC 461-467)

- ▶ Policy to preserve and protect historic and prehistoric properties of national significance. Established the National Historic Landmarks Program and set standards for inclusion of landmarks.
- ▶ No penalties are directly associated with this act.

Hunting, Fishing and Trapping on Military Lands [An update of the Military Construction Authorization Act]

- ▶ Policy requiring the Department of Defense to comply with fish and game laws of the state or territory in which it is located.
- ▶ No penalties are directly associated with this act.

Land and Water Conservation Fund Act of 1963 (PL 88-578; 78 Stat 897; 16 USC 460d, 460[1]4 to 460[1]-11)

- ▶ Policy to provide funding for the encouragement of development of land and water-based recreation and to ensure the stability of the recreation areas.
- ▶ No penalties are directly associated with this act.

Marine Mammal Protection Act of 1972 (PL 92-522; 16 USC 1361)

- ▶ Policy to prohibit the taking or importation of marine mammals and marine mammal products.
- ▶ Penalties are enforced under 16 USC 1375.

Marine Protection, Research and Sanctuaries Act. (Ocean Dumping Act) as amended (PL 92-532; 33 USC 1401)

- ▶ Policy to protect and preserve marine habitats as designated by the Secretary of Commerce as sanctuaries. Restricts activities in sanctuaries.
- ▶ No penalties under this act; however, many acts may be punishable under RCRA at \$25,000 per day of violation.

Migratory Bird Conservation Act (PL Chpt. 257; 45 Stat 1222; 16 USC 715 et seq.)

- ▶ Policy to set aside lands for the conservation of migratory birds. Established the Migratory Bird Conservation Commission which has the mandate to identify and obtain useful lands.
- ▶ No penalties are directly associated with this act.

Migratory Bird Treaty Act (PL 65-186; 16 USC 703 et seq.)

- ▶ Policy to prohibit the taking, possession, and trade of migratory birds, except as permitted by regulations.
- ▶ Penalties are enforced under 16 USC 707.

Migratory Game Fish Study Act of 1959 (PL 86-359; 73 Stat 642, as amended; 16 USC 760e)

- ▶ Policy to study migratory marine fish of interest to recreational fishing. Provides funding for said study.
- ▶ No penalties are directly associated with this act.

Migratory Marine Game Fish Act (PL 86-358; 73 Stat 643; 16 USC 760c-760g)

- ▶ Policy that provides funding for various studies of marine game fish.
- ▶ No penalties. are directly associated with this act.

Mineral Leasing Act of 1920 (30 USC 181 et seq.)

- ▶ Lays out leasing and prospecting guidelines for coal, phosphate, sodium, potassium, oil, oilshale, gilsanite, and gas on Federal lands.
- ▶ Penalties for fraudulent leasing: fines up to \$500,000 and/or 5-years imprisonment.

Multiple-Use Sustained Yield Act of 1960 (16 USC 528-531)

- ▶ Policy to manage land in concert with the goals of a multiple-use program. Provides funding to support this act.
- ▶ No penalties are directly associated with this act.

National Environmental Policy Act (NEPA) of 1969 (as amended, PL 91-190; 42 USC 4321-4347)

- ▶ Policy to require federal agencies to consider the environmental impact of actions taken. Mandates a decision-making process to achieve the goal. This act is a procedural and declarative act. For any federal action that is not a Categorical Exclusion, an Environmental Assessment must be made in order to determine if a full Environmental Impact Statement (EIS) must be prepared. The EIS must follow specific guidelines outlined in 50 CFR 1500-1508. The act does not require the federal agency to chose the least environmentally destructive alternative; only that the agency considers the environmental impact and alternatives to the action.

- ▶ No penalties are directly associated with this act.

National Historic Preservation Act (NHPA) of 1966 (as amended. PL 89-665; 16 USC 470 et seq.)

- ▶ Policy to protect and preserve historic and prehistoric objects, structures, sites, and districts which are included in or are eligible for inclusion in the National Register. Establishes the National Register and the Advisory Council on Historic Preservation. This act defines a decision-making process to be followed when planning an action in the vicinity of a historic area. Requires the development of mitigation plans if historic areas will be affected. Provides funding opportunities to achieve the goals of this act.
- ▶ No penalties are directly associated with this act.

National Trails System Act of 1968 (16 USC 1241-1249)

- ▶ Policy to develop a system of national trails for recreational purposes.
- ▶ Penalties are provided for users abusing rules of trails. No penalties for developers or managers of trails.

Noise Control Act of 1972 (PL 92-574, 42 USC 4905)

- ▶ Policy giving the EPA the power to regulate and enforce noise level standards for commercial sources. Includes such sources as construction, transportation, motors, and engines. However, the FAA has final authority over aircraft noise.
- ▶ Penalties - Criminal: \$25,000 per day of violation and/or up to one year imprisonment for the first offense. Fines and prison terms are doubled for second offense.

Outdoor Recreation on Federal Lands (16 USC 4601{1})

- ▶ Policy encouraging the development of outdoor recreation activities on federal lands.
- ▶ No penalties are directly associated with this act.

Resource Conservation and Recovery Act (RCRA) including the Solid Waste Disposal Act (42 USC 6901-6992, as amended)

- ▶ Policy and regulations to reduce and limit the amount of solid wastes entering landfills. Prohibits the open dumping of solid or hazardous wastes and encourages reuse and recycling of solid wastes. Provides funding for programs and projects intended to achieve the goal of this act.
- ▶ Penalties - Criminal: Fines up to \$25,000 - \$50,000 per day of violation and/or 1-2 years imprisonment. Knowing Endangerment fines up to \$250,000 and/or 5 years imprisonment. For organizations, fines up to 1 million dollars. Civil: Fines up to \$25,000 per day of violation Citizen Suits: A person may bring a civil suit against any person, the U.S. Government, or agency which is in violation of this act, subject to minor restrictions.

Rivers and Harbors Act of 1899 (33 USC 401 et seq.)

- ▶ Policy to protect and maintain navigable waterways of rivers and harbors. Restricts certain activities in said areas. Penalties for wrongful deposit of refuse, injury to harbor improvements, and obstruction of navigable waters.
- ▶ Penalties - Criminal: Not less than \$300 nor more than \$2500 and/or not less than 30 days nor more than 1 year imprisonment.

Safe Drinking Water Act (as amended, 42 USC 300f et seq.)

- ▶ Policy to protect the potable water resources of the nation. Sets standards for drinking water quality and prohibits various activities in said water resources.
- ▶ Penalties - Criminal: Fines up to \$50,000 and/or 5 years imprisonment. Civil: Fines up to \$25,000 per day of violation. Citizen Suits: A person may bring suit against any person, U.S. Government, or agency for violation of this act.

Salmon and Steelhead Conservation and Enhancement Act of 1980 (PL 96-561; 94 Stat 3275; 16 USC 3301 et seq.)

- ▶ Policy to enhance the renewable resource of salmon and steelhead fish and to provide the effective management thereof.
- ▶ No penalties are directly associated with this act.

Soil and Water Resources Conservation Act of 1977 (16 USC 2001-2009)

- ▶ This act requires the development of a national plan to prevent soil and water resources deterioration.
- ▶ No penalties are associated with this act.

Surface Resources Use Act of 1955 (30 USC 601, 603, 611 to 615)

- ▶ Policy regarding disposal of mineral and vegetative matter on public lands by the United States. Also deals with title and claim issues. Expands on the Materials Act of 1947.
- ▶ No penalties are directly associated with. this act.

Timber Sales on Military Lands [An update of the Military Construction Authorization Act] (10 USC 2665)

- ▶ Policy regarding the use of funds generated from timber sales on military lands.
- ▶ No penalties are directly associated with this act.

Toxic Substances Control Act (TSCA) (as amended, 15 USC 2601-2654)

- ▶ Policy to promote an understanding of effects of chemical substances and mixtures on health and the environment. Encourage research in this area, especially by manufacturers. Regulates those chemical substances and mixtures that pose an unreasonable risk of injury to health or the environment.
- ▶ Penalties - Criminal: Fines up to \$25,000 per day of violation and/or 1 year imprisonment. Civil: Fines up to \$25,000 per violation (each day of continued violation constitutes a separate violation). Citizen Suits: A person may bring a civil suit against any person, the U.S. Government, or agency which is in violation of this act.

Water Resources Planning Act and Water Resource Councils Principles and Standards Act of 1965 (PL89-80; 42 USC 1962 et seq.)

- ▶ Policy to encourage the conservation, development, and utilization of water and related land resources of the Nation.
- ▶ No penalties are directly associated with this act.

Watershed Protection and Flood Prevention Act (PL 92419; 68 Stat 666, as amended & 86 Stat 667; 16 USC 1001)

- ▶ Policy of the Federal Government to work with the States to prevent damages due to erosion/flood water and sediments, so as to improve the quality of the nation's land and water resources.
- ▶ No penalties are directly associated with this act.

Wild and Scenic Rivers Act of 1968 (16 USC 1271-1287)

- ▶ Policy to protect and preserve the nation's wild and scenic rivers. Sets up the National Wild and Scenic Rivers system and criteria for including rivers in the system. Prohibits licensing or federal funding for water resource projects on rivers in the system.
- ▶ No penalties are directly associated with this act.

## **FEDERAL REGULATIONS**

Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (Title 36, Part 1191)

- ▶ Codifies guideline requirements for buildings complying with the Americans with Disabilities Act (ADA). The guidelines are applicable to new design, construction, and alterations of all buildings required to adhere to the ADA. Guidelines are technical specifications regarding such aspects of minimum number of parking spaces, minimum hallway widths, work-top levels, etc.

Curation of Federally-Owned and Administered Archaeological Collections (Title 36, CFR, Part 79)

This regulation sets forth standards, procedures and guidelines for federal agencies involved in collecting prehistoric and historic remains and artifacts recovered under the authority of the Antiquities Act, the Reservoir Salvage Act, Section 110 of the National Historic Preservation Act, or the Archaeological Resources Protection Act.

Department of the Interior Supplemental Regulations (for the Archaeological Resources Protection Act of 1979) (Title 43, CFR, Part 7.20) Reserved

Determination of Eligibility for Inclusion in the National Register of Historic Places (Title 36, CFR, part 63)

- ▶ This regulation was developed to aid federal agencies determine the eligibility of property for inclusion in the National Register. The process is based on EO 11593 and regulations of the Advisory Council on Historic Preservation (36 CFR 800).

Endangered and Threatened Wildlife and Plants (Title 50, CFR, part 17)

- ▶ This regulation was developed to implement the Endangered Species Act.

Environmental Protection and Enhancement (Title 32, CFR, Part 650)

- ▶ This regulation defines policies, responsibilities, and procedures for the protection of environmental quality for the Department of the Army in peace time. Discusses water, air, solid waste, hazardous and toxic materials, noise, historic preservation, oil and hazardous substance spills, and environmental pollution prevention.

#### Interagency Cooperation-Endangered Species Act (Title 50, CFR, Part 402)

- ▶ This regulation provides guidance for interagency cooperation in the implementation of the Endangered Species Act.

#### Migratory Bird Permits (Title 50, CFR, Part 21)

- ▶ Establishes procedures for obtaining permits to take, possess, or transport any migratory birds or nests.

#### National Register of Historic Places (Title 36, CFR, Part 60)

- ▶ This regulation defines the National Register of Historic Places. In addition, it sets forth procedures for inclusion of properties on the National Register and describes limitations and benefits of inclusion on the National Register.

#### Preservation of American Antiquities (Title 43, CFR, Part 3)

- ▶ This regulation defines the jurisdiction over American antiquities located on various federal lands. Provides a process for permitting the examination, excavation, and gathering of objects of antiquity.

Protection of Archaeological Resources (Title 32, CFR, Part 229) This regulation establishes standards and procedures for federal land managers dealing with archaeological resources on public or Indian lands in the United States.

#### Protection of Historic and Cultural Properties (Title 36, CFR, Part 800)

- ▶ This regulation defines the "106 process" of the National Historic Preservation Act. Seeks to accommodate federal activities while maintaining the historic integrity of properties under the jurisdiction of federal agencies.

Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (Title 40, CFR, Parts 1500-1508)

- ▶ Defines procedures for complying with the National Environmental Policy Act.

#### The Secretary of the Interior's Standards for Historic Preservation (Title 36, CFR, Part 68)

- ▶ This regulation sets forth standards for preservation requirements of any proposed grant-in-aid project funded through the National Historic Preservation Fund.

### **EXECUTIVE ORDERS (EO)**

Environmental Effects Abroad of Major Federal Actions (EO 12114), 4 January 1979.

- ▶ Essentially extends the requirements of the National Environmental Policy Act, Marine Protection Research and Sanctuaries Act, and the Deepwater Port Act to federal actions outside the United States.

Exotic Organisms (EO 11987) 24 May 1977.

- ▶ Executive agencies shall restrict the use of federal funds, programs, or authority to export native organisms to foreign lands where such species do not occur naturally.

Federal Compliance with Pollution Control Standards (EO 12088) 13 October 1978.

- ▶ Places responsibility on the heads of federal agencies for compliance with federal pollution control standards.

Floodplain Management (EO 11988) 24 May 1977, as amended.

- ▶ Policy enacted to avoid long and short term negative impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development. Intergovernmental Review of Federal Programs (EO 12372) 16 July 1982.
- ▶ Provides opportunity for state and local governments to consult on federal programs to which they would contribute funding or be affected by such programs.

Prevention, Control and Abatement of Environmental Pollution at Federal Facilities (EO 11752).

- ▶ Intent to ensure that the federal government, in running its facilities, provides leadership in the protection and enhancement of the quality of water, air, and land resources.

Protection and Enhancement of Environmental Quality (EO 11991).

- ▶ Amends EO 11514 so as to give the Council on Environmental Quality the power to promulgate procedural regulations regarding the preparation of environmental impact statements and to resolve conflicts between agencies regarding implementation of the National/Environmental Policy Act.

Protection and Enhancement of the Cultural Environment (EO 11593) 13 May 1971.

Protection of Wetlands (EO 11990) 24 May 1977.

- ▶ Directs each agency to take action to minimize the destruction, loss, or degradation of wetlands.

Use of Off-Road Vehicles on Public Lands (EO 11644), as amended by EO 11989.

- ▶ Sets forth provisions for allowing the heads of executive agencies to determine the allowable usage of off-road vehicles on federal land with the goal of protecting the areas from overuse.

## **DEPARTMENT OF DEFENSE DIRECTIVES**

Accounting for Production and Sale of Forest Products (DOD Directive 7310.5), 25 January 1988.

- ▶ Updates policy, prescribes procedures, and assigns responsibilities for DOD reimbursement and for a state's entitlement to a share in net proceeds derived from forest products sold from military installations or facilities.

Archaeological and Historic Resources Management (DOD Directive 4710.1), 21 June 1984.

- ▶ Directive provides policy, prescribes procedures, and assigns responsibilities for the management of

archeological and historical resources located in and on waters and lands under DOD control. Environmental Effects Abroad of Major Department of Defense Actions (DOD Directive 6050.7), 31 March 1979.

- ▶ This directive provides policy for the decision-making process of considering environmental effects on actions by the DOD undertaken outside of the United States. Essentially, this directive extends the requirements of NEPA to these situations.

Environmental Effects in the United States of DOD Actions (DOD Directive 6050. I), 30 July 1979.

- ▶ This directive provides policy that all DOD actions undertaken in the United States will be in compliance with the NEPA mandates.

Natural Resources Management Program (DOD Directive 4700.4), 24 January 1989.

- ▶ This directive establishes policies and procedures for an integrated program of natural resources management. It stresses multiple-use strategies.

## **ARMY REGULATIONS**

Environmental Protection and Enhancement (AR 200-1), 23 May 1990.

- ▶ Regulation deals with environmental protection and enhancement. This regulation covers the following topics: water, air, hazardous materials, solid and hazardous wastes, noise, oil and hazardous substances spills, environmental restoration, asbestos, radon, and other programs.

Environmental Effects of Army Actions (AR 200-2), 23 January 1989.

- ▶ This regulation sets the policy for the Army to comply with NEPA. Implements the Council on Environmental Quality's regulations, EO 12114, DOD directives 6050.1 and 6050.7.

Historic Preservation (AR 420-40), 15 May 1984.

- ▶ This regulation provides procedures and responsibilities for the treatment of historic and archeological properties, sites, objects, districts, etc. on Army land. Also provides instructions on locating and treating historic properties in accordance with NHPA. Establishes a method of creating a Historic Preservation Plan.

Museums and Historical Artifacts (AR 870-20), 9 February 1987.

- ▶ This regulation is intended to improve the quality and professionalism of Army museums and the preservation of items contained in Army museums.

Natural Resources -- Land, Forest, and Wildlife Management (AR 200-3), 28 February 1995.

- ▶ This regulation sets the policy and procedures for management of natural resources to ensure the support of the military mission and to ensure conservation, restoration, and appropriate use of renewable resources.